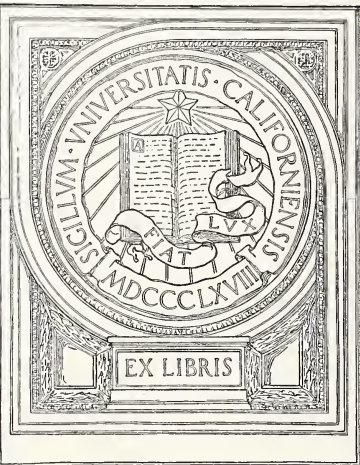




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1934-35 MEMORIAL ADDRESS  
OF THE  
LOUISIANA STATE MEDICAL SOCIETY

JAMES T. NIX, M. D.  
NEW ORLEANS

To have been entrusted to give the memorial address of the Louisiana State Medical Society for the year 1934 is an honor which I deeply appreciate, a solemn and sacred privilege, a responsibility only outweighed, if at all, by the sincerity with which it is accepted and the earnest endeavor to equal the task.

The obligation is especially felt as the Reaper's toll mounts to a distressingly high figure. In the group obituary only a small spray will be taken from each of forty-four flowers of the profession, the barest outline of their work and achievements, and as a spiritual bouquet placed in the secretary's hands to adorn the records of our society.

"There is no heart that is not the sepulchre of one or more dead."

Death, as I see it, is just the beginning. It is just another great adventure. When a great man dies, there is an afterglow that reaches far into the night. Our Master said, "I will strike the mighty oak in the desert and replace it with a fine young tree."

There is no death! The stars go down  
To rise upon the other shore  
And bright in heaven's jewelled crown  
They shine forevermore.

Death is delightful,  
Death is dawn,  
The waking from a fevered night  
Unto beauty, peace and light.

Ours is a profession of sacrifice, of martyrs, of immortals, of Chailles, Souchons, Gelpis and

Smyths, of Gardeners, Piersons, McGehees and Engelbacks.

Ours is a profession of men whom the lust of office cannot kill and the spoils of office cannot buy; men who have opinions and a will; men who have honor; men who will not lie; men who can stand before a demagogue and damn his treacheries without blinking; tall men, sun-crowned men, who live above the fog in public duty and in private thinking.

On the hallowed pages of the past, each year has written in gold the names of noble warriors who knew no service too hard, no sacrifice too great when suffering humanity called. As I review the long roster of the dead, rich and poor, old and young are united hand in hand, shoulder to shoulder, heart to heart as they labor without thought of compensation, and urged only by the love of their sacred calling and the satisfaction returned in the knowledge or work well done. You'll find them in the hovels of the poor and the palaces of the rich, at the peaceful fireside and on the battlefields of war;—wherever there is a call of sickness or distress, you'll find them there! If needed for the medical profession, with pride I could say, the word conscription would never have been coined. Doctors are always volunteers.

Leaves have their time to fall,  
And flowers to wither at the north wind's  
breath,  
And stars to set,  
But thou hast all seasons for thine own, O  
Death!

Yes, all seasons, all ages, all classes, professions and pupils, colonels and corporals, the haughty and the humble.

Not till the loom is silent  
And the shuttles cease to fly,

Shall God unroll the canvas  
And tell us the reason why

The dark threads are as needful  
In the Weaver's skillful hand  
As the threads of gold and silver  
In the pattern He has planned.

Some workman has builded the pillars  
As well as the spire so tall  
Someone has made with her stitches  
The flag that flies over all.

Whether making a roof from the weather  
Or building a house for a king,  
Only by working together  
Men have accomplished a thing.

Alike as one, the medical profession lives the same life, shares like sorrows, enjoys the same pleasures, fights the same battles, and as a unit pledges love, loyalty, and life to the faithful performance of its duty.

Doctors have been referred to as Saviors of the world whom the Almighty has deigned to take unto His council for the liberation of humanity and its many and varied ills, men whose mission is to relieve and never to cause pain, men with kindness of heart, delicacy of feeling, thoughtfulness for others, unbounded silent charity.

Men with natures nobly planned  
To rule, to comfort, to command  
Humble men who work and pray,  
And when duty calls,—obey.

Again, the doctor has often been compared to the mariner at sea; disease, suffering and sorrow, the troublesome and often uncharted oceans of his travel. Unmoved, unafraid of lashing waves, blinding tempests, treacherous currents, dauntlessly he voyages on. The microscope is his compass. Stars of the immortals inspire him and point the course to a safe harbor. To our friends that we pay tribute and who have honored us, beacon lights are suddenly extinguished, a fierce storm has swept stars from the sky, the blackest night envelops all, but ever his ship moves on.

Nailed to the mast head can be found this inscription.

Fight on, my men, Sir Andrew says,  
I'm wounded slight, though not yet slain,

I'll just lie down to bleed awhile  
And then arise to fight again.

At last the hour has struck as the stately ship goes by to the haven under the hill. One by one others follow in the wake, there to reach a safe landing, a holy rest and peace at the last. There seems to be wafted back to us from that farther and beautiful shore the message of that great soldier-doctor, Colonel John McCrae, who was there to meet them.

We are the dead, short days ago  
We lived, felt dawn, saw sunset glow,  
Loved and were loved, and now we lie  
In Flanders Fields.

Take up our quarrel with the foe  
To you from failing hands we throw  
The torch, be yours to hold it high  
If ye break faith with those who die,  
We shall not sleep though poppies grow  
In Flanders Fields.

And even as the holy nun renews yearly her solemn vows before the Altar of God, may I ask you on this day to pledge to our sacred dead every effort, our resources and life if necessary, to retain unsullied and unstained the lofty ideals of our noble doctor-dead.

#### DECEASED PHYSICIANS OF LOUISIANA STATE MEDICAL SOCIETY 1934-1935

Dr. Andrew Achee, Carville, Louisiana.

Dr. Carroll Woolsey Allen, New Orleans, Louisiana.

Dr. Rezin Lawrence Armstrong, Pleasant Hill, Louisiana.

Dr. Henry Bayon, New Orleans, Louisiana.

Dr. Charles Alexis Borey, New Orleans, Louisiana.

Dr. Ernest Joseph Cather, Oakdale, Louisiana.

Dr. Robert Henry Soleman, Jr., Vivian Louisiana.

Dr. George Benjamin Collier, New Orleans, Louisiana.

Dr. Barbour D. Cooper, Mansfield, Louisiana.

Dr. Charles Thomas DeLoach, Haynsville, Louisiana.

Dr. John C. Derbofen, New Orleans, Louisiana.

Dr. Cornelius A. M. Dorrestein, New Orleans, Louisiana.

Dr. Wallace Joseph Durel, New Orleans, Louisiana.

Dr. Theodore Engelbach, Grand Isle, Louisiana.

Dr. James Harvey Galloway, Roseland, Louisiana.

Dr. Charles Arthur Gardiner, Sunset, Louisiana.

Dr. F. V. Gremillion, Pineville, Louisiana.

Dr. A. Marshall Haas, Bunkie, Louisiana.

Dr. Edward J. Huhner, New Orleans, Louisiana.

Dr. Samuel Lawrence Joyner, Ashland, Louisiana.

Dr. James Tanner Keator, Bermuda, Louisiana.

Dr. John Luther Kelly, Oak Grove, Louisiana.

Dr. A. B. LeCour, Batchelor, Louisiana.

Dr. Charles Eugene Latham, Baton Rouge, Louisiana.

Dr. Paul Lawrence, Haughton, Louisiana.

Dr. James Lawrence Lenoir, Amite, Louisiana.

Dr. Clarence M. McCain, Rosepine, Louisiana.

Dr. Lucius D. McGehee, Hammond, Louisiana.

Dr. Allyn B. Moise, Shreveport, Louisiana.

Dr. Harry E. Nelson, New Orleans, Louisiana.

Dr. Frank Anderson Overbay, New Orleans, Louisiana.

Dr. E. I. Persinger, Mansfield, Louisiana.

Dr. Clarence Pierson, Alexandria, Louisiana.

Dr. Isaac Posnainsky, New Orleans, Louisiana.

Dr. Louis L. Rabouin, New Orleans, Louisiana.

Dr. G. A. Sigur, Edgard, Louisiana.

Dr. Edwin Caldwell Simonton, Shreveport, Louisiana.

Dr. John Smyth, New Orleans, Louisiana.

Dr. Christopher H. Tebault, New Orleans, Louisiana.

Dr. John Allen Thames, Jackson, Louisiana.

Dr. F. M. Thornhill, Arcadia, Louisiana.

Dr. Thomas M. Toler, Washington, Louisiana.

Dr. Sylvan B. Wolff, Opelousas, Louisiana.

Dr. Allen G. Zeagler, Lacompote, Louisiana.

#### DR. ANDREW ACHEE, CARVILLE

Dr. Achee was a native of Iberville Parish and graduated from the Tulane University of Louisiana School of Medicine in 1895. He was a member of the Louisiana State Medical Society until 1922. He practiced in Louisiana all his life and died in New Orleans on November 3, 1934.

#### DR. CARROLL WOOLSEY ALLEN, NEW ORLEANS

Dr. Allen was born on October 30, 1874. He received his early education in the city schools, and went to Tulane University. He was awarded the degree of Doctor of Medicine in 1901. He went to Crowley, Louisiana, where he did a general practice until 1905 when he returned to New Orleans to become a member of the staff of Professor Matas. Under his direction, Dr. Allen carried on experimental work on the vascular system and together they published important contributions on the occlusion of large arteries and the aorta. The aluminum bands they used in their investigations proved to be of inestimable value and are internationally known as the Matas-Allen Bands.

He was appointed visiting surgeon at Charity Hospital in the service of Dr. Matas in 1905 and he held this position until his resignation in 1925.

He taught in the New Orleans Polyclinic from 1906 until 1926 holding the positions of clinical professor of surgery and of professor of clinical anesthesia. He was the author of a text "Local and Regional Anesthesia", a subject in which he was a recognized authority and a pioneer. Appointed clinical instructor of surgery in his Alma Mater in 1907, he rose steadily and at the time of his resignation, twenty years later, he had been Clinical Professor of Surgery for several years. At the same time he resigned from the staff of Touro Infirmary, on which he had been Senior Associate in Surgery, in order to accept the appointment of Chief of Surgery in the Southern Baptist Hospital, where he remained until his death, which was caused

by heart disease and diabetes mellitus, on April 14, 1934. He was a member of the Orleans Parish Medical Society, Louisiana State Medical Society, Southern Medical Association, American Medical Association and he was a Fellow of the American College of Surgeons.

Even in his student days Dr. Allen stood out for his skill with his hands, his faithfulness, his reliability. He was much beloved and respected by all the men he taught. His sympathy, his big understanding heart, his ever present sense of humor, endeared him to his patients as well as to his friends. They and the profession are bereaved by his loss.

DR. REZIN LAWRENCE ARMSTRONG,  
PLEASANT HILL

Dr. Armstrong was born in 1857, the son of Dr. Lawrence Armstrong, pioneer physician of Pleasant Hill. He graduated from the University of Louisiana in 1879 and practiced medicine in Pleasant Hill for fifty-two years. He died on November 3, 1934, of acute cardiac failure.

DR. HENRY BAYON, NEW ORLEANS

Dr. Henry J. Bayon was born in New Orleans on May 12, 1864. He received his A. B. degree from Jesuit College in 1882 and graduated in Medicine from Tulane University in 1888. After two years of internship he began to practice medicine. He was made Acting Professor and Demonstrator of Anatomy in Tulane in Sept. 1907, and remained in this Department for nearly 20 years. In 1918 he was made Professor of Applied Anatomy. He resigned in 1926 and then became Emeritus Professor of Applied Anatomy. He was a typical gentleman of the "Old French School", always affable and courteous. He had a wide practice and was much beloved by his patients and by his many friends. He died in New Orleans on April 19, 1934.

He was a member of the Orleans Parish and the Louisiana State Medical Societies, the Southern and the American Medical Associations, the Society of American Anatomists, and Alpha Omega Alpha.

DR. CHARLES ALEXIS BOREY, NEW ORLEANS

Dr. Borey was born in New Orleans, in 1872.

He graduated from the Tulane School of Medicine in 1895. Originally a general practitioner, he specialized in pediatrics some years after graduation. He was connected actively with the Milliken Memorial department of Charity Hospital and was head of its staff for a number of years, but lately he retired from active service at the institution.

He was a member of the Orleans Parish and of the Louisiana State Medical Societies, and of the American Medical Association. He was also a director of the Security Homestead and a member of the Southern Yacht Club.

He died at Hotel Dieu, New Orleans, on February 27, 1935, after an illness of four months.

DR. ERNEST JOSEPH CATHER, OAKDALE

Dr. Cather was born in 1878. He graduated from the University of Kansas School of Medicine in 1903. He died in New Orleans on May 27, 1934. He was a member of the Louisiana State Medical Society and of the American Medical Association.

DR. ROBERT HENRY COLEMAN, JR., VIVIAN

Dr. Coleman was born in 1862. He graduated from the University of Alabama School of Medicine in 1888. He practiced in Shreveport and was a members of the Fourth District Medical Society. He died in 1934.

DR. GEORGE BENJAMIN COLLIER, NEW ORLEANS

Dr. Collier was born in Brundredge, Alabama, on December 19, 1889. He received a B. S. degree from the Alabama Polytechnic Institute in 1910, and later was awarded the M. A. degree from the same institution. He taught chemistry in his Alma Mater and then he entered the Tulane University of Louisiana School of Medicine, graduating in 1916. He was elected a member of the Alpha Omega Alpha Honorary Fraternity. He went to Tuskegee, Alabama, and practiced as an ear, nose and throat specialist from 1916 until 1926.

In 1926 he came to the Eye, Ear, Nose and Throat Hospital of New Orleans and was resident physician there for a year. He practiced in New Orleans from that time until his death, July 9, 1934.



He was Assistant Professor of Otolaryngology in the Post-Graduate School of Medicine. He was Senior Visiting Surgeon at the Baptist Hospital and also at the Eye, Ear, Nose and Throat Hospital. He was a member of the New Orleans Athletic Club and was always interested in his work. He was a Mason and a Shriner and he had many friends inside and outside the profession. He was a member of the Orleans Parish and of the Louisiana State Medical Societies, and of the Southern and American Medical Associations. He was a Fellow of the American College of Surgeons. He was also a Diplomat of the Board of Otolaryngology and was affiliated with sectional and national societies of otolaryngology.

DR. BARBOUR D. COOPER, MANSFIELD

Barbour Cooper was born in 1867. He graduated from the Medical College of Vanderbilt University in 1888, and then went to the New York Polyclinic to receive training in his specialty, diseases of the eye, ear, nose and throat. He practiced at Mansfield for forty years. He was a member of the American Medical Association, Louisiana State Medical Society and the DeSoto Parish Medical Society. He died on October 19, 1934.

DR. CHARLES THOMAS DeLOACH, HAYNSVILLE

Charles Thomas DeLoach was born in Claiborne Parish near Homer, Louisiana, August 7, 1880 and died suddenly in Haynsville on December 25, 1934. He graduated from the Memphis Medical School in 1905 and soon afterward married Miss Jennie Thomas of Magnolia, Arkansas. His whole life was spent in the general practice of medicine in or near his native parish. For twenty years he resided at Serepta, but recently he had moved to Haynsville. He was a member of the Webster Parish Medical Society and of the Louisiana State Medical Society.

DR. JOHN C. DERBOFEN, NEW ORLEANS

Dr. J. C. Derbofen was born in 1871. He graduated from the Tulane University Department of Medicine in 1896. He was a member of the Orleans Parish Medical Society, of the Louisiana State Medical Society and of the

American Medical Association. He died in New Orleans on January 11, 1935.

DR. CORNELIUS A. M. DORRESTEIN, NEW ORLEANS

Dr. Dorrestein was born in Holland in 1873. He arrived in New Orleans when he was nineteen and completed his education there, graduating from the Tulane School of Medicine in 1897. He practiced medicine in New Orleans for thirty-six years. At one time he specialized in gynecology and had a large practice. He was a member of the Board of Directors of the Whitney National Bank and of many other civic and business organizations. He died suddenly on April 16, 1935. Dr. Dorrestein belonged to the American Medical Association and to the Louisiana State and the Orleans Parish Medical Societies.

DR. WALLACE JOSEPH DUREL, NEW ORLEANS

Dr. Durel was born and reared in New Orleans and was graduated from the Tulane University School of Medicine in 1897. Almost immediately he became connected with Charity Hospital and a few years later when he developed tuberculosis he began to specialize in the disease, determined to discover a cure for himself, which at the same time would benefit the hundreds of others similarly afflicted. He had the satisfaction of obtaining complete control of his infection and of becoming recognized as an authority on tuberculosis. He devoted his energies entirely to the fight on the dread malady and contributed substantially to a better understanding of it and of its treatment. For years he was in charge of the Breaux Building for the tuberculous, at Charity Hospital, and some fifteen years ago, upon completion of the Dibert Memorial, he was appointed Chief of the White Services in Tuberculosis. He was affiliated with the faculties of the local medical schools and belonged to professional organizations.

He died in New Orleans on April 8, 1935 in his sixtieth year. Dr. Durel was a member of the American Medical Association and of the Louisiana State and Orleans Parish Medical Societies.

DR. THEODORE ENGLEBACH, GRAND ISLE

Dr. Engelbach was born in 1856 at Charles-

ton, South Carolina. He graduated from the Tulane University of Louisiana School of Medicine in 1894.

More than a quarter of a century ago he went down to Grand Isle to die. But his ailment improved and after some time, completely recovered, he was able to bless his community with his services as a general practitioner. In time he became deputy coroner and so well identified with the Islet, that to speak of Grand Isle was to speak of him.

Dr. Engelbach died in one of the wards of Charity Hospital on February 26, 1935, after an illness of two months. He was a member of the Louisiana State Medical Society and of the American Medical Association.

DR. JAMES HARVEY GALLOWAY, ROSELAND

Dr. Galloway was born in Madison County, Mississippi, on February 13, 1890. He was educated at Millsaps College, Jackson, Mississippi and at the University of Mississippi. He graduated from the Tulane University School of Medicine in 1914. He practiced in New Orleans for a short time, later entering the government service and being stationed at Port Eads for eight years. He then practiced at Pleasant Hill, Louisiana, and went to Roseland in 1928 where he remained until his death there on June 8, 1934. He was a member of the Tangipahoa Parish Medical Society, the Louisiana State Medical Society and of the American Medical Association.

DR. CHARLES ARTHUR GARDINER, SUNSET

Dr. Gardiner was born at Grand Coteau in 1872. He received his primary schooling near his home, went to Tulane University and was graduated from the medical school in 1896. From that time he practiced medicine at several parts of the State.

In 1932 he was elected to the State Senate and was serving his first term when stricken. He died at home, in Sunset, Louisiana, on February 15, 1935.

He was a member of the St. Landry Parish Medical Society and of the Louisiana State Medical Society. He had done general practice in Bristol for thirty years. He had a large number of patients and was one of the pioneers

in medical organization in his native parish. In the Senate he was instrumental in the passage of the law abolishing the license tax on the members of the medical profession.

DR. FIELD VERNON GREMILLION, PINEVILLE

Dr. Field Vernon Gremillion was born on March 12, 1889 at Cottonport, Louisiana. He was a graduate of Louisiana State University and the Tulane University Medical School. Doctor Gremillion had been a practicing physician in Alexandria and Pineville since 1907. Doctor Gremillion died suddenly in 1935.

DR. A. MARSHALL HAAS, BUNKIE

Dr. A. Marshall Haas was born in 1874. He graduated from Tulane University School of Medicine in 1895. He practiced in and around Bunkie, for more than a quarter of a century and was widely known for the large amount of charitable work he did. At one time he was a member of the Board of Directors of the Central Louisiana Hospital for the Insane. He was coroner of Avoyelles Parish at the time of his death, which occurred on December 13, 1934 after an illness of two weeks.

DR. EDWARD J. HUHNER, NEW ORLEANS

Dr. Huhner was born in New Orleans, November, 1878. He graduated from the Tulane College of Medicine in 1899. He was a general practitioner and a member of the Orleans Parish Medical Society, of which he was Treasurer in 1905. He was also a member of the Louisiana State Medical Society and of the Southern and American Medical Associations. His past affiliations were with the New Orleans Polyclinic, New Orleans College of Pharmacy and the Louisiana State College of Dental Surgery. He died in New Orleans on August 31, 1934.

DR. SAMUEL LAWRENCE JOYNER, ASHLAND

Dr. Joyner graduated from the Memphis Hospital Medical College in 1903. He was a member of the Natchitoches Parish and the Louisiana State Medical Societies. He died in the year 1934.

DR. JAMES TANNER KEATOR, BERMUDA

Dr. Keator was born in 1866. He graduated from the Georgia College of Eclectic Medicine



and Surgery, Atlanta, Georgia. He was a charter member of the Natchitoches Parish Medical Society in 1903; he was a Delegate to the state meeting in 1926, Vice-President of his parish society in 1929 and President in 1933. Dr. Keator died in 1934.

DR. JOHN LUTHER KELLY, OAK GROVE

Dr. Kelly was born in 1882. He graduated from the College of Physicians and Surgeons of Memphis, Tennessee, in 1907. He served eighteen months overseas during the World War as Captain in the medical corps. He was well known in American Legion circles and was a special delegate to the recent Legion convention held at Maimi. He was a member of the State Board of Health, the Tri-Parish Medical Society and the Louisiana State Medical Society. Dr. Kelly was killed on November 7, 1934, when an automobile in which he was riding crashed against a bridge near Rayville.

DR. A. B. LaCOUR, BATCHELOR

In December, 1881, Dr. LaCour was born at LaCour, where his parents, A. J. LaCour and Mary Brown, had always lived. His early education was in the parish public schools and later he attended St. Stanislaus College in Bay St. Louis and received his medical degree at Tulane. He had a large practice in his parish and was loved and honored by his patients who were all his devoted friends. He was married in early life to Miss Sue Emberhagen and five children survive him. Dr. LaCour died suddenly on February 2, 1935.

DR. CHARLES EUGENE LATHAM, BATON ROUGE

Dr. Latham was born in 1884. He graduated from the Memphis Hospital Medical College in 1912. He was a member of the East Baton Rouge Parish Medical Society and the Louisiana State Medical Society. Dr. Latham died in Baton Rouge on July 7, 1934.

DR. PAUL LAWRENCE, HAUGHTON

Dr. Lawrence was born in Alabama on May 10, 1839. He graduated from Tulane in 1867 and died in Bossier Parish on November 3, 1934. He had retired and was not a member of any medical organization. During the Civil War he lost one leg, the injury occurring at the

upper end of the femur. He was a pioneer doctor of Bossier Parish.

DR. JAMES LAWRENCE LENOIR, AMITE

Dr. Lenoir was born at Mulden, Mississippi, October 29, 1870. He received his B. S. degree from the Buena Vista College, Mississippi, and his M. D. degree from Tulane in 1893. He practiced in Mississippi and in New Orleans for a short time. Later Dr. Lenoir went to Amite, Louisiana, and he practiced there until his death on April 9, 1934.

DR. CLARENCE M. McCAIN, ROSEFINE

Dr. McCain graduated from the Tulane College of Medicine in 1896. He was a member of the Vernon Parish Medical Society and of the Louisiana State Medical Society. Dr. McCain died in 1934.

DR. LUCIUS D. McGEHEE, HAMMOND

Dr. McGehee was born in 1881. He graduated from the Tulane Medical School in 1904. He was a member of the Tangipahoa Parish Medical Society and the Louisiana State Medical Society. He died in Hammond on January 30, 1935, of pneumonia. He is survived by his widow, two daughters and four brothers.

DR. ALLYN B. MOISE, SHREVEPORT

Dr. Moise was born in 1887. He graduated from the Tulane School of Medicine in 1903. He was a member of the American Medical Association, Louisiana State Medical Society, the Shreveport Medical Society, the American Academy of Ophthalmology and Otolaryngology, and he was a Fellow of the American College of Surgeons and a Diplomate of the American Board of Otolaryngology. He specialized in diseases of the ear, nose and throat and the eye. He died in Shreveport on December 23, 1934.

DR. HARRY E. NELSON, NEW ORLEANS

Dr. Nelson was born on June 30, 1885, in Algiers, the son of the late W. J. Nelson. He attended the Algiers elementary schools and was graduated from Tulane as an honor student in 1912. He was an interne for two years at Charity Hospital and for one year in Shreveport Charity Hospital. He was for years resident physician at Hotel Dieu and was a member of

the Orleans Parish Medical Society, the Louisiana State Medical Society and the American Medical Association. He was a director of the Standard Homestead Association. He died on May 16, 1934, in New Orleans after an illness of two years.

DR. FRANK ANDERSON OVERBAY, NEW ORLEANS

Dr. Overbay was born in Georgia, June 3, 1882, and died May 11, 1934. He was a graduate of Tulane University School of Medicine, class of 1914.

He was on the Staffs of Baptist Hospital, Charity Hospital and the French Hospital. He taught Diseases of the Eye at the Louisiana University Medical Center. He practiced medicine in New Orleans during his entire professional career.

DR. E. I. PERSINGER, MANSFIELD

Dr. Persinger for many years practiced in Mansfield and was president of the De Soto Paris Medical Society in 1909, 1913, 1922, 1923, 1924. He was vice-president in 1910 and in 1921. Dr. Persinger died in 1934.

DR. CLARENCE PIERSON, ALEXANDRIA

Dr. Pierson was born on July 18, 1866, in Natchitoches, the son of Judge David Pierson and Sidney Pipes. He obtained his preparatory school education at a military school in Baton Rouge. Following graduation he went to Louisiana State University where he received a bachelor of science degree. He then attended Tulane University and graduated in Medicine in 1894.

Dr. Pierson began his practice in New Iberia and remained there until 1900, serving as the Superintendent of Schools and Coroner. From New Iberia he moved to Alexandria where he met and in 1903 married Miss Hunter. In 1904 he was appointed by Governor Newton C. Blanchard as first Superintendent of the new Central Louisiana Hospital. In 1905 he was transferred as head of the hospital at Jackson, where he changed the entire system.

Dr. Pierson in 1921 resigned to become President of the Commercial Bank and Trust Co. of Alexandria. He remained head of the Bank until 1921, when he returned as Superintendent

of the Central Louisiana Hospital. On November 27, 1934, he was relieved by Governor Allen of his arduous task and appointed Councillor to the Hospitals at Pineville and Jackson and the Louisiana Training School.

Dr. Pierson was former exalted ruler of the Elks, a shiner and a member of the Woodmen of the World. He was former president of the Alexandria Chamber of Commerce and the Rotary Club. He was President of the Ammen Powder Co., Alexandria, and of Hot Wells, Boyce.

Dr. Pierson was a veteran of the Spanish American War. He was a member and former president (1917) of the Louisiana State Medical Society, and of the Louisiana Hospital Association. He was a member of the Southern and of the American Medical Associations. Also he belonged to the Rapides Parish Medical Society and to the American Psychiatric Association.

He died in New Orleans on December 27, 1934.

DR. ISAAC POSNAINSKY, NEW ORLEANS

Dr. Isaac Posnainsky was a native of Texas but he came to New Orleans thirty years ago. He was educated in Texas and in New Orleans, and began the practice of medicine in New Orleans twenty-five years ago. He was a member of the Hiram Lodge No. 70 and Magnolia Grove No. 58. Dr. Posnainsky died on May 8, 1934.

DR. LOUIS L. RABOUIN, NEW ORLEANS

Dr. Rabouin was born in New Orleans in 1866. He was graduated from the Tulane School of Medicine in 1892. For forty-three years he did general practice and was well known throughout the city for his charitable work. He was a member of the Orleans Parish and the Louisiana State Medical Societies and of the American Medical Association. He died at Touro Infirmary, New Orleans, on February 25, 1935, after an illness of about three years.

DR. G. A. SIGUR, EDGARD

Dr. Sigur was born in 1866. He graduated from the Tulane School of Medicine in 1894. He had been a member of the Louisiana State

Medical Society until 1927. Dr. Sigur died on April 24, 1934.

DR. EDWIN CALDWELL SIMONTON, SHREVEPORT

Dr. Simonton was born in 1885. He graduated from Tulane University in 1913. He specialized in Otolaryngology and was a member of the Shreveport and of the Louisiana State Medical Societies, and a Fellow of the American College of Surgeons. Dr. Simonton died in Shreveport on July 31, 1934.

DR. JOHN SMYTH, NEW ORLEANS

Dr. Smyth was a native of Tensas Parish. He originally was a civil engineer but he came to New Orleans about forty years ago to take up medicine. He followed his uncle, the late Dr. Andrew Smyth, physician and Director of the Mint. He graduated from Tulane University in 1900.

He was a member of the Staff at Charity Hospital and at Hotel Dieu. He was first librarian at the latter and his services merited the recognition of the Staff, who unveiled a tablet in his honor in 1929. During the World War he was a surgeon at the Base Hospital No. 24, a New Orleans unit which was in France for several months. He had the rank of Captain.

Dr. Smyth was a member of the Orleans Parish and the Louisiana State Medical Societies, the Southern Surgical and the American Medical Associations. He was a Fellow of the American College of Surgeons and of the American Association for Thoracic Surgery.

Dr. Smyth was born in 1869 and he died in New Orleans on February 26, 1935, following an illness of about fourth months.

DR. CHRISTOPHER H. TEBAUT, NEW ORLEANS

Dr. Tebault was born in New Orleans on August 19, 1868, the son of Dr. Christopher Tebault, Sr., and Miss Sallie Bradford Bailey. Dr. Tebault Sr. was surgeon-general of the United Confederate Veterans for ten years before his death in 1914 and his wife was state regent of the Daughters of the American Revolution.

Dr. C. H. Tebault was educated in the public schools of New Orleans and received his B. S. and M. D. Degrees from Tulane University the latter in 1895.

He served with the ambulance corps at Charity Hospital and later as an ambulance resident student in Touro Infirmary.

When the Spanish American War broke out Dr. Tebault volunteered and served on the Staffs of Generals Lawton and Wood. He was also at one time personal physician to General Leonard Wood and to his family. During the War he had charge of the officers' hospital in Cuba and the Centro Beneficio Hospital at Santiago, Cuba. After the war he resumed the practice of medicine and continued it until his last illness. He was a member of the Orleans Parish Medical Society and of the Louisiana State Medical Society.

Dr. Tebault died after an illness of several months on September 4, 1934. He had a large practice and his many patients will miss his services.

DR. JOHN ALLEN THAMES, JACKSON

Dr. Thames was born in 1882 in Collins, Mississippi. He graduated from Tulane University Medical School in 1908, and went to Tangipahoa Parish where he practiced most of his life. He was at one time physician for the Natalbany Lumber Company at Natalbany. He was appointed to the Board of Supervisors of the East Louisiana State Hospital for Insane six years ago, and was named Superintendent on September 1, 1934. Dr. Thames died suddenly of heart failure on September 30, 1934, at the home of relatives in Harvey, Louisiana.

DR. F. M. THORNHILL, ARCADIA

Dr. Thornhill was for many years a general practitioner of medicine in Arcadia. He was Corresponding Secretary of the Bienville Medical Society 1884-1885 and President in 1896. He was charter member of reorganization and president in 1904.

Dr. Thornhill died in 1934.

DR. THOMAS M. TOLER, WASHINGTON

Dr. Toler graduated from the Tulane College of Medicine in 1903. He had been a member of the Louisiana State Medical Society until 1932. He died in April, 1934. Dr. Toler had practiced medicine for twelve or fifteen years in Washington.

DR. SYLVAN B. WOLFF, OPELOUSAS

Dr. Wolff was born in 1891. He practiced medicine in Opelousas. At one time he was a member of the Louisiana State Board of Supervisors and President of the St. Landry Parish Medical Society. Because of illness he had to retire from active practice for several years. Dr. Wolff died on June 3, 1934.

DR. ALLEN G. ZEAGLER, LACOMPTÉ

Dr. Zeagler was born in 1889 and practiced medicine in Lacompte, Louisiana. He died on June 3, 1934 at the home of his sister in Olla, Louisiana. He was a member of the Louisiana State Medical Society.

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### THE LOUISIANA SYSTEM OF HYGIENIC PUBLIC EDUCATION\*

FRED J. MAYER, M. D.  
OPELOUSAS, LA.

The Louisiana System of Hygienic Public Education had its origin in the yellow fever epidemic of 1878, when a medical student suffering from the fever, was quarantined for forty days in a cane field, denied access to home and deprived of vital necessities; at the end of forty-eight hours, he emerged from the valley of the shadow of death, thanks to Providence and a nurse, his mother; his convalescence spent in the torrid cane aisles, raving against the authorities and exhausting the *sesquipedalia Verba* of profanity, until sternly rebuked by his mother, who laid the official conduct to fear based on the universal belief that the disease was contracted through contact of person, or handling textiles, coffee, hair, and even coin, whereas her experience in the epidemic of 1853 discredited the fomites theory and inclined to the belief that it was transmitted by mosquitoes as pointed out by Nott of Mobile and a French doctor of Martinique. This started a train of thought; it seemed incredible that the magnificent resources of the South should be immolated on the altar of a dastardly fear, when universal education along sanitary lines would end the

panics; in thinking of a method to be pursued, he remembered his father had a scheme of public education in all the sciences, by means of lectures illustrated by lantern slides and that in the winter of 1870 and 1871 he gave a practical demonstration, the last in Opelousas, when he projected live mosquitoes, flies and other insects on the screen, also micro-photos of polluted water and the conversion of a zoological garden of live organisms into a cemetery of dead germs, by applying heat and the lively interest it evoked in a lay audience. Enthused, the student drafted a plan of public education in hygiene, quoting the latin adage. "Life is not mere living, but the enjoyment of health, his castle in the air was based on the postulate; that the highest function of the Physician is prevention and his sacred duty to instruct the masses in the cause, nature and prevention of contagious disease in man and domestic animals."

He forgot that over a century after Jenner gave the world a prophylactic against variola, that outbreaks still occur; on graduating he started the propaganda locally and was amazed at the cold, cynical and censorious reception by the fraternity, who asserted the scheme was an iridescent dream and unethical to talk medicine to the laity, to his reply, "How in—are you going to combat epidemics unless you secure the cooperation of the public?" Are you going to leave the instruction to quacks and patent medicine almanacs along false lines? The answer was "Our function is cure and leave instruction to organized, ethical medical bodies." So it was carried to the Attakapas Medical Society, oldest in the State, later to this body and still later, at the instance of the president, John Callan to the Orleans Society and made the text of the annual eighth of January oration in 1898, "The greater battle of New Orleans:" it was endorsed by all these societies. On the latter occasion the essayist quoted Dr. Benjamin Rush. "City authorities were justly chargeable with the lives of all who die of preventable diseases within their jurisdiction and that they should be made responsible for the same before the courts of justice." Lincoln: "With public sentiment nothing can fail, without public sentiment nothing can succeed, con-

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\*Read before the Louisiana State Medical Society, New Orleans, April 29-May 1, 1935.



sequently he who moulds public sentiment goes deeper than he who enacts statutes or pronounces decisions, he makes statutes and decisions possible to be executed."

So universal was the belief in the fomites theory, that while admitting the possibility of direct transmission by the mosquito, the student still believed textiles could convey the *materies morbi*, until Reed's discovery ended the delusion. A series of resolutions setting forth the cause and prevention of tuberculosis, to be printed on leaflets in English, French and Italian, for free public distribution under the auspices of this body, was unanimously adopted and pigeon holed and the opportunity lost of anticipating the action of the International Tuberculosis Congress of Washington, D. C. by over a quarter of a century, when the stone which the builders rejected became the corner stone of the medical edifice. In 1885 the president of the Attakapas society delivered in Lafayette an illustrated lecture on hygiene, to see whether a lay audience would sit it out; the test was satisfactory, the laity reacted more favorably than the fraternity. But as everyone's business is nobody's business, periodically the South was excited by rumors and outbreaks of yellow fever and variola, tuberculosis and typhoid being ignored, culminating in the yellow fever epidemic of 1897, with its shot gun obligato. The town of Lafayette on the mere rumor of a case, was quarantined by the country people. Supplies running short, a crowd of citizens headed by Col. G. A. Breaux attempted to cross the line and were met halfway on a bridge by determined men and an armed conflict narrowly averted, this and other untoward instances, led to the formation of the State Sanitary Association.

#### CHARTER.

STATE OF LOUISIANA,  
PARISH OF ST. LANDRY.

BE IT KNOWN that on this 8th day of December, 1897, and of the Independence of the United States of America, the One Hundredth and Twenty-first, before me, John H. Harmanson, a notary public in and for said State and Parish duly commissioned and sworn—personally came and appeared the several persons whose names are hereafter subscribed who declare that, availing them-

selves of the provisions of the laws of this State, relative to the formation of Corporations, they have formed themselves, their associates and successors, as hereinafter set forth, into a corporation to be known as the "LOUISIANA STATE SANITARY ASSOCIATION." That the purposes and objects of such corporation as set forth in Article II of its constitution adopted Nov. 22d, 1897, are declared to be:

"The advancement of sanitary science,

"1st. By the organization of a central sanitary body with auxiliary circles in every parish in the State and its extension, until it embraces all the Southern, and particularly the Gulf and South Atlantic States.

2nd. The founding of a School of Hygiene and Quarantine on the Chautauquan plan of correspondence, Lectures and Summer Institutes.

3rd. The publication of a monthly journal devoted to the objects of the Association.

4th. To secure through an educated public opinion the enactment of adequate health laws: Laws on vital statistics, on food adulteration and water pollution, on meat and dairy inspection, on vaccination, and their enforcement; and the founding of hospitals for contagious diseases.

5th. To systematically educate the people of the State to the necessity of substituting rational, scientific, uniform, maritime and inland quarantines during periods of epidemic danger or invasion for the barbarous shot-gun quarantines, which, while crippling commerce afford at best a doubtful and insecure protection.

6th. The restriction and prevention of Tuberculosis and the founding of Sanatoriums for its Hygienic-Dietetic treatment."

That its officers and committeemen shall be such as are chosen at an annual convention of the "LOUISIANA STATE SANITARY ASSOCIATION," to be held at the times and places to be declared by it, and that such officers and committeemen shall consist of a President, Vice-Presidents, one from each Congressional District, now or hereafter to be formed, a Secretary and Treasurer, and the following standing committees:

1. The Executive Committee.
2. " Finance Committee.
3. " Advisory Council.
4. " Publication Committee, and the Board of Regents of the School of Hygiene.

That its Executive Committee shall consist of the officers, the Ex-Presidents, the Regents, the Lecturers in the School of Hygiene and Finance Committee.

That its Advisory Council "Shall consist of delegates from each Sanitary Circle in the State, from each Town Council and Police Jury of the State, from the Commercial Exchanges and Boards of

Trade, from the Boards of Health, from the Medical, Pharmaceutical and Dental Societies, from the Colleges, from the Louisiana Chautouqua and other educational and scientific bodies, from the Press Association of the State, and the Press Club of New Orleans, and the Commercial Travelers' Association; the basis of representation from each to be fixed by the Executive Committee."

These two committees shall, in joint session, "Serve as a nominating committee of officers and committeemen, for the ensuing year and make such recommendations to the Association as shall best secure the objects of its creation."

These officers and committeemen shall hold office until the election of their successors by the annual meeting of the Society which shall be held at the time and place selected by the Executive Committee.

The said corporation shall have all the usual and ordinary powers of a corporation, necessary and appropriate to aid the objects for which it is formed; its domicile shall be in the Parish of St. Landry, and citation shall be served upon the

President, or in his absence upon the Secretary, and it shall continue in existence for twenty-five years, from the filing thereof. No member of this corporation shall ever be held or bound individually, by reason of any liability made or incurred by it, except for the amount of the annual dues, which is hereby fixed at One Dollar per annum; but the managers of the same may receive any voluntary contribution or donation that may be made for its use.

The members and associates of this corporation shall consist of the subscribers and of all who may connect themselves with this Association; and members cease to be such, upon resignation addressed to the Secretary of the Society. The subscribers: active members or their representatives are entitled to be members of the annual convention with one vote each, until the election of officers, at the annual convention in 1898; the officers shall be composed as follows:

Dr. Frederick Loeber, of Orleans, President.

Dr. Jno. N. Thomas, Vice-President 1st Congressional District.

Dr. Rudolph Matas, Vice-President 2d Congressional District.

Dr. W. D. White, Vice-President 3d Congressional District.

Dr. J. C. Eagan, Vice-President 4th Congressional District.

Judge A. A. Gunby, Vice-President 5th Congressional District.

Dr. C. J. Ducote, Vice-President 6th Congressional District.

Dr. W. R. Lastrapes, Treasurer Pro Tem.

Dr. Fred J. Mayer, Secretary.

This society may incorporate with similar or other Sanitary Associations in the other Southern States in such manner as its Executive Committee may determine.

Thus done, read and signed at Opelousas, La., on the day and date above written in presence of E. P. Veazie and A. D. Harmanson, competent witnesses, who sign with the parties and me, Notary, after reading the whole:

## SIGNED:

Fred J. Mayer, M. D.  
I. E. Shute, M. D.  
W. M. Thompson, M. D.  
R. M. Littell, M. D.  
B. A. Littell, M. D.  
Chas. F. Boagni, M. D.  
P. Foster, M. D.  
W. R. Lastrapes, M. D.  
J. A. Haas, M. D.  
E. M. Boagni, Presd't.  
St. Landry State Bank  
Fritz Dietlein  
O. H. Terwilliger  
R. A. Mayer, M. D.  
A. J. Perkins, M. D.  
H. C. Salles, D. D. S.  
N. P. Moss, M. D.  
J. D. Trahan, M. D.  
J. P. Fancez, M. D.  
W. W. Lesley, M. D.  
F. W. Courtney, M. D.  
U. Préjean, M. D.  
Albert Guidry  
O. P. Daly, M. D.  
B. Guilbeau, M. D.  
Homer Mouton  
Diomel Durio  
E. H. McGee  
H. Barousse  
D. Roos  
F. R. Tolson, M. D.

## SIGNED:

D. A. Dimitry  
John N. Ogdon  
C. J. Thompson  
F. J. Pulford, D. D. S.  
E. B. Dubuissou  
C. H. Miller  
W. F. Clopton, M. D.  
G. W. Martin, M. D.  
E. T. Lewis  
L. E. Littell, C. E.  
D. S. Edwards  
Leonce Sandoz  
R. Morhinveg,  
Ant. Dietlein  
Mason McBride  
Louis C. Smith  
James O. Chacheré  
Sam'l Haas  
Walter S. Durke,  
John T. Nixon  
W. J. Sandoz, Att'y.  
J. M. Jackson  
H. Armstrong  
Phil L. Asher  
Julian Mouton  
Crow Girard  
T. A. Hicks  
G. A. M. Cooke, M. D.  
S. L. Hébrard  
W. D. White, M. D.  
G. G. Rogers, M. D.

## WITNESSES:

E. P. VEAZIE,  
A. D. HARMANSON,

JOHN H. HARMANSON,  
Notary Public.

(SEAL)

Filed Dec. 8, 1897.

ALFRED PAVY,  
Clerk.

STATE OF LOUISIANA, {  
PARISH OF ST. LANDRY. }

I have examined the within and foregoing act of incorporation, and I find nothing therein to conflict with the laws of the State of Louisiana. I therefore approve the same officially at Opelousas this 8th of December, A. D. 1897.

R. LEE GARLAND,  
District Attorney.



STATE OF LOUISIANA, }  
PARISH OF ST. LANDRY. }

I, Alfred Pavy, Clerk of the 11th Judicial District of Louisiana, do hereby testify that the above and foregoing is a true copy of the original on file and of record in my office in Miscellaneous Book No. 10, page — Dec. 8, 1897:

Witness my hand and seal of office at Opelousas, this 8th day of Dec., 1897.

ALFRED PAVY,  
Clerk.

(SEAL)

The first popular institute of hygiene ever held, convened in Opelousas in 1897. There were hygienic bodies both here and abroad, like the American Public Health Association, that held annual conventions and published a volume of proceedings, the public was not excluded, but not catered to, the delegates were experts mainly State and Federal officers and so it was not an institute in the sense of the Louisiana system; this institute was addressed by Doctors: Formento, Metz, Dyer, Denegre Martin, Chassagnac, W. H. Dalrymple and other sanitarians, who covered the field of yellow fever, tuberculosis, typhoid, milk and water pollution, variola and sex hygiene. This was the first real opportunity of testing out the Louisiana system; the session lasted seventeen hours, adjourned at midnight, for the ladies to retire, when the eloquent Chassagnac held the audience until 2:30 A. M. on sex hygiene. During the entire session there was no break in the continuity of interest, unprecedented in the annals of institute work; this result was in part secured, through one of the distinctive features of the Louisiana system, viz; the introduction of musical numbers between essays and discussions, thus lessening the tension on the lay mind and the strain on the nervous system. It is manifest that these musical numbers must be carefully selected, it would never do to follow a lecture on tuberculosis, with the "Dead march in Saul," the majority would beat a retreat, nor would it do for a chorus to sing, "When Johnnie Comes Marching," or "John Brown's Body," for then the tense nerves would seek relaxation in a wave of levity negating the aim of the essayist; it calls for selections by a doctor of music, who understands the physiological and psychological effect of certain arias and symphonies to soothe

the nervous system, or to rouse it to deeper sympathy or to a keener sense of service. Rostond brings out this point, in Cyrano de Bergerac, when he quells a rising revolt of the starving cadets of Gascony, by ordering the regiments flutist to play the soft airs of Languedoc, breathing of home and pastures green and suddenly ordering martial strains as the enemy approached.

The good results of this Institute were shown in a cleaning of cisterns uncleaned since the Civil War, a temporary improvement in the milk and water supply, commencement of screening, an awakening to the necessity of sewage system; but as always happens when the instruction ceases, indifference or neglect follow; close the church doors for six months and note the number of lapses from grace that follow.

The following year at the instance of President Dalrymple an Institute was held in Baton Rouge; the cost of these institutes falling on individuals was prohibitive, it was felt the State should bear the expense, so a Hygiene bill was drafted, calling for a Commissioner of Hygiene, whose function was purely educational, charged with the duty of correlating and coordinating all educational agencies: the Medicos, schools, churches, press, agricultural and Pedagogical Institutes, clubs, women's organizations, lodges and labor unions, and whose special duty was to hold Institutes of Hygiene in every county seat, to organize central leagues and subleagues in the wards; it was found by experience that the best results were obtained through the schools.

The bill called for an appropriation of \$4,000.00 per annum: the message of the Governor setting forth a fine financial condition of the state, gave promise of an easy passage of the Bill, it was a great surprise when the Governor fought the measure through committee stages, although told by Dr. Ducote, his leader in the Senate, that it was a good measure, endorsed by the State Medical, Orleans Medical, Agricultural, Dental, Pharmaceutical, Pedagogical and other Societies and by the Mobile Quarantine Convention; in spite of his opposition it carried by large majorities in 1928 and was vetoed; re-introduced in 1900 it met

still more bitter opposition yet carried by increased majorities, unanimously in the Senate and was again vetoed; the first time in legislative history that a measure of great public benefit upon which the legislative will has been twice affirmatively expressed, was twice vetoed, although the veto message, admitted it was a good measure regretfully refused because the State was unable to bear the expense.

Sometime thereafter his Excellency, on a front seat applauded the sentiments enunciated by Dr. Wylie, the food expert, the sentiments he vetoed in the Hygiene Bill. "Oh! for a 40 parson power to chant thy praise hypocrisy."

Professor Joseph Jones, estimated the epidemic of 1897 cost New Orleans two hundred millions of dollars. Would a four year course in prevention of yellow fever have prevented this loss?

Prior to the passage of the Hygiene Bill a series of lectures on hygiene of home and farm was delivered under auspices of State Department of Agriculture, and the farmers were as much interested as in strictly agricultural topics; this doubtless had a bearing on the passage of the Bill.

In 1905 the doctors of New Orleans in six weeks converted the cosmopolitan population, white and black from the fomites theory to the true mosquito doctrine; could the State in a four year intensive course of instruction, have been likewise converted? The record of 1906 answers in the affirmative. In that year the Irion Board of Health, first established confidence in the board's veracity and that the policy of concealment would no longer obtain, hence not one of the surrounding states sent a watcher, when a case of yellow fever broke out in New Iberia in August, accepting the daily report of its progress and extinguishment by the application of the Louisiana System of Hygienic Education laying the foundation for the cooperation of the public, in the vigorous fumigation and anti-mosquito measures requisite and necessary, and this without any interruption to transportation and traffic, stamping out the disease in New Iberia and all possible sources of infection elsewhere and this in the dog days of August, thus preventing for the

first time in the epidemic history of the South, a recrudescence of the disease in a year following an epidemic year (1905).

The Board of Health was rewarded by being ousted from office and a new president appointed, who as a member of the Legislature, fought the ethical demands of this body and the Irion board in their successful fight for a pure food and drug act, anticipating the food and drug act by Congress.

Mississippi was the first state in 1909 to devote its entire health appropriation to a campaign of hygienic education, mainly through the schools; the enlightened policy of the Board of Health was rewarded by future liberal appropriations.

1912-13 a Bubonic Plague Institute was held in the Tulane Theatre under auspices of this body, at which it was pointed out that an infected rat had been found in the Stuyvesant docks and that by the law of epidemiology, the human plague should appear in two years, affording ample time to institute vigorous anti-rat campaigns; all church denominations were represented by the most eminent divines in New Orleans, who delivered masterly addresses, each address being followed by musical numbers by distinguished artists, admittance free; by actual count there were seventy-five people in the audience.

The Plague came in on schedule and cost New Orleans \$8,000,000.00 for rat proofing.

In 1918 a series of institutes under auspices of the Tuberculosis League was held throughout the State. Anti-tuberculosis circles were formed in the parishes, which failed to function properly mainly owing to the widespread epidemic of Influenza.

Each epidemic irruption, however, was followed by an improvement in our sanitary history, verily;

"Sweet are the uses of adversity.

Which like a toad, ugly and venomous

Wears yet a precious jewel in its head."

May the bitter experiences and mistakes of the past, lead the citizenry to uphold the hand of the State, Parochial and Municipal Health Officers in their anti-diphtheria and other sanitary measures, taking up the battle cry of

the dynamic president of the State Board of Health, "May the sanctity of human life be the 1935 slogan of health officer, doctor, preacher, teacher and entertainer."

#### DISCUSSION

Dr. Jos. A. O'Hara, (New Orleans): You have heard a very masterly description of the past history of the sanitary conditions of Louisiana. While I am prepared to say that I can report progress in most Parishes, I feel I must say that the progress in some Parishes is very slow. In making that statement I want to say the slowness is due entirely to the neglect of physicians in reporting their cases. It is just a question of the medical profession being interested in their patients until they get well and then they forget all about reporting the cases.

I see from Dr. Mayer's paper that years ago they were looking for the cause of disease in flies, grasshoppers and all that kind of stuff, when to-day we use the microscope with 1200 magnifying power. That is the difference between then and now. Just to show you the results of the system of public hygiene, I will have to read you some of the statistics, which I know you will enjoy as much as a fellow enjoys a heart attack after eating a good square meal. I will take the last two years, just the per cent. to show you how unjustly Louisiana gets a black eye, when she really does not deserve it.

In 1933, 976 typhoid cases were reported in the State of Louisiana. That means we had 976 cases reported in 64 Parishes. That would be splendid if we could put it on a banner and carry it around. In 1933, 244 deaths out of the 976 cases; and in 1934, 210 deaths with 787 cases reported.

Tuberculosis, in 1933, 2014 cases, and deaths 1585. Out of the 2014 about 500 of them got back. Tuberculosis in 1934, 1599 cases and the deaths were 1524. Nearly everybody who had tuberculosis in the State of Louisiana died. I think we the medical profession should go back and take a post-graduate course and give Louisiana a chance for courage.

Smallpox, 75 cases reported in 1933, and we gave over some hundred thousand points to vaccinate them in the places where smallpox had been!

In 1933, 2394 cases of pneumonia and 1389 deaths. In 1934, 1684 cases of pneumonia and out of the 1684, 1582 died. Why anybody is left in the State of Louisiana, I don't know!

Diphtheria, 1025 cases in 1933 and we only lost 102 cases. In 1934, 1027 cases and only 95 deaths.

Heart disease, no record at that particular time, in 1933 nobody had heart disease, but, by jiminy,

4065 died of it! In 1934, nobody with heart disease, but 4016 died.

Cancer, 1500 cases in 1933 and (I think this is the best yet) we lost 1568 cases. Those are the figures. You don't have to go to school to learn them; just get on the State Board of Health and learn. In 1934, 1102 cases, and we lost 1559—all the rest got better.

It is a gratifying situation in that there is a downward trend in the five major preventable diseases, but a steady rise in the diseases not directly under public health control such as heart disease, cancer, homicides, and auto accidents.

If I am not taking up too much time, I would like to talk about some of the laboratory examinations, which include milk, water, etc. In 1933, we made 126,234 examinations, and in 1934, 98,607.

We have 109 Parish Health Officers, some of them both City and Parish in a number of Parishes. That is one thing I don't know how to explain. We have doctors in every Parish, in every City, town and hamlet, but when you try to put a doctor on the health board nobody wants to serve. Nobody wants to have anything to do with health matters. For that particular reason when something happens in a Parish now not organized, the finances run out like water out of a funnel. The per capita for health work is 18.2 cents. For instance, we had an outbreak of typhoid in one of the Parishes week before last. It progressed and looked as though it were going to be more than that. We had in one instance found on a house-boat on a bayou, three cases of typhoid fever. One of the cases had been moved from a place in the city out to the house-boat, and the others contracted it. We asked the folks where they threw the discharges. They said they dumped them in the bayou. "What do you do with the water in the bayou, do you use it for cooking food and drinking?" "No, we don't use it. We go over there about five blocks down and get a pitcher of water." "If you don't use that water for drinking and cooking purposes what do you use it for?" They said "We only wash our dishes and clothes in it." And they wanted to know where they got the typhoid! The State Board of Health had to spend about \$3,000.00 just to find out there was no organization of the medical profession in that section.

I will go along with some of this dry stuff. We are trying to eradicate bovine tuberculosis. A total number of 124,693 cattle have been tested to date in the State of Louisiana, with a total of 1475 reactors found. Bovine tuberculosis infection of dairy cattle 0.40 per cent. Parishes in which bovine tuberculosis has been eradicated, 46. Sanitary inspections, in 1933, 38,432, and in 1934, 31,847. Food inspections 1933, 18,203, and 1934,

16,986. Food seized 1933, 522,814 pounds, and 1934, 177,203 pounds. Food condemned, 1933, 475,252 pounds and in 1934, 139,811 pounds. That shows the necessity of watching the foodstuff in the State of Louisiana, as there is no better way of transmitting disease than through foodstuffs. Just the other day we condemned some tomato paste and failed to take it away.—we condemned 2600 cases of it and found 2400 cases back on the grocery shelf.

Our dairy inspections in 1933 were 8935, and 1934, 8297. Milk plant and creamery inspections, 1933, 807; 1934, 1543. Miscellaneous sanitary inspections 25,152 in 1933, and last year 30,128. One hundred and fifty-four (154) towns have satisfactory water supply and serve approximately 946,000. Fifty-four towns (54) have sewerage systems, serving 831,000 persons. Not one-half of the population is served, but it covers a large proportion of the urban population.

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### THE IMPORTANCE OF MENTAL HYGIENE TO THE GENERAL PRACTITIONER\*

T. J. PERKINS, M. D.  
SIMMSPORT, LA.

Mental hygiene has been practiced since the earliest days of civilization. The father who taught the son to square his life with its environment by the rule of virtue, honesty, and straightforward thinking; the college professor who assisted the student in adjusting himself to scholastic, social, or economic problems have practiced mental hygiene at the social level.

It was not until 1908, when Clifford Beers wrote his autobiography, *The Mind That Found Itself*, and directed his energies to the promotion of better treatment of those suffering from mental disease, and the prevention of mental disorders, that mental hygiene assumed the proportions of an important branch of scientific medicine.

It may be said that no man, since the days of Pinel, Esquirol, and Tuke, has done more for the mentally diseased, than has Clifford Beers.

It was through his efforts that the Connecticut State Society for Mental Hygiene, the first society of its kind in the world, was organized.

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\*Read before the Louisiana State Medical Society, New Orleans, April 29-May 1, 1935.

Two years thereafter, largely through his influence, the National Committee for Mental Hygiene came into existence. Following this, we see the associated state societies, mental hygiene clinics, psychiatric clinics, child guidance societies, social service organizations, and various allied organizations: all of which have contributed to the mental hygiene movement, which culminated in the International Congress of Mental Hygiene held in Washington in 1930, where representative psychiatrists from some fifty countries joined in discussing the prevention of mental disease, and the promotion of mental health.

A thorough discussion of the principles of mental hygiene would exceed the limitations of this paper, therefore the discussion will be limited to that level which is of greatest interest to the general practitioner.

It is estimated, and I think correctly estimated, that fifty per cent of all hospital beds in the United States are occupied by patients in mental hospitals.

The United States Census report of 1933 gives the number of new admissions to the mental hospitals in the country as 70,000.

Through the courtesy of the superintendents of the two State Hospitals in Louisiana, it is learned that 4407 new patients have been admitted to the hospitals within the last five years, or an average of 881 patients per year.

Frankwood E. Williams, in commenting on the census report of 1933 in an article published in the May issue of *Mental Hygiene*, makes the following inquiry:

Where are the 70,000 persons in the United States, who by the following year will have found his or her bed in some mental hospital; or the 140,000 to be admitted within two years; or the 350,000 to be admitted within five years; or the 700,000 who will have followed the same path in a period of ten years?

Following the same line of thought, and making it applicable to our own question of public health, it may be asked:

Where are the 1,762 persons in Louisiana who are destined to become patients in one of our State Hospitals within two years, or the



4,405 to be admitted within five years, or the 8,810 to be admitted within ten years?

The figures just given are worthy of serious consideration.

These people are to be found in every station and walk of life, and are problems that enter into nearly every home, workshop, school, church, and jail, and form a part of the problems underlying such great social phenomena as government, poverty, crime, social conflict, religion, and prostitution.

The above mentioned group does not include the host of individuals, who, under the great nervous tension brought to every one through the influence of modern civilization, and the stress of the present day economic conditions, are suffering from a multitude of somatic complaints that are purely functional, and which are the result of emotional conflicts to which they are unable to adjust.

Since the human organism, as a whole, must function at its every level as an integrated unit, it follows that this vast host of patients, who are suffering from functional disturbances, will not be helped, nor will their multitude of somatic complaints be understood until they are evaluated under a psycho-biological concept.

Pavlov, in his most excellent work, *The Conditioned Reflexes*, has proven the psychic and somatovisceral interrelationship, which must enter into the equation when endeavoring to evaluate the influence of emotional conflict on the organism as a whole.

In May, 1934, issue of the *Journal of Nervous Diseases*, Dr. Wm. H. White expresses the same thought, when he says, "The oneness of body and mind, the organism as a whole concept, and the interrelation between the organism and its environment, particularly the social environment, constitute an irreducible minimum of consideration that must be borne in mind, if we are to arrive at any comprehensive idea of the patient and his illness."

Since "invalidism so often depends upon the personality of the patient," it follows that an analysis of his longings, desires, hopes, successes, and failures, and the pre-natal and post-natal environmental influences that have contributed

to making him what he is, should receive as careful analysis as should the symptom complex of any abstract disease. Such intangibles are not to be found by physical examination, in the test tube, or by diagnostic instruments of precision.

This analysis would lead in most instances to the peg upon which many morbid states and functional disturbances are hung; and through the application of the fundamental principles of mental hygiene and psychotherapy a large percent of those suffering from a definite psychotic trend could be so oriented in regard to their true condition as to enable them to "carry on": many of those who are victims of emotional conflicts could be led to a satisfactory adjustment.

Too much emphasis can not be placed upon the value of square, clean, honest, straightforward thinking in meeting a difficult situation, nor can too much emphasis be placed upon the necessity of formulating an honest, purposeful plan of reaction thereto.

Some writer expressed this idea when he said, "He is a weak man indeed, who can not twist and weave the threads of his existence, however strained, however strong, however weak, or however tangled, into the great cable of purpose by which he lies moored to his life of action."

Somewhere along life's pathway within the next ten years 700,000 persons in the United States, and at least 8,810 persons in Louisiana, will call upon the members of the medical profession for relief from a psychotic trend or a definite psychic disorder.

Each day hundreds of maladjusted persons who are suffering from borderline conditions and functional disturbances are calling upon the general practitioner. It is here that the necessity arises for such a knowledge of medical psychology and psycho-pathology as would enable him to recognize the early symptoms of morbid mental states, and apply the proper methods for relief, or refer them to the psychiatrist.

Much has been and is being done by the medical profession and public health authorities in the prevention of disease, and prolonging the span of human life. May it not be asked if a proportionate amount of work has been done

for the preservation of mental health, or the prolongation of mental life, to the end that the vital forces might ebb and flow alike?

Again; there is an economic side to the mental hygiene equasion.

It was my privilege to be associated with the East Louisiana State Hospital during the biennial period of 1891 and 1892, when that hospital was the only State Institution in Louisiana for mental disease. The number of patients at that time was 700, and the biennial appropriation was \$230,758.00 for maintenance, buildings, improvements, and repairs. Since that time we have seen the growth of the East Louisiana State Hospital, the erection and growth of the Central State Hospital at Pineville, and the Feeble Minded Colony and Training School at Alexandria. Compare, if you will, biennial appropriations for the East Louisiana State Hospital for the biennium of 1891 and 1892 with the State appropriations for the three institutions during the present biennium; and decide whether or not there is an urgent need for more actively functioning societies for mental hygiene:

More psychiatric clinics, mental hygiene clinics, child guidance clinics, social service organization, active interest in neuropsychiatry, in the medical schools, psychology advisers in the colleges, closer psychiatric supervision of the graded and high schools to the end that mental diseases may be better controlled, and mental health be better preserved.

Dr. Frederick L. Fenno (New Orleans): Dr. Milton Freiman was scheduled to present the discussion of this paper and what I have to say is merely extemporaneous remarks in an attempt to replace Dr. Freiman.

In his closing paragraphs, Dr. Perkins left little for anyone to do in the way of recommendations as to the necessity of seeing his problem approached and being given careful consideration by the medical profession, and particularly by the general practitioner. On all sides lay organizations and lay groups are developing interest in mental hygiene. As an example of what consideration the Federal Government, for instance, feels that this topic demands, they are endeavoring to give some degree of psychiatric training to all E.R.A. workers. Hardly a month goes by that some woman's organization is not presenting some

type of program along this particular line. In both Louisiana State University and Tulane in the Medical Schools, and the other schools, psychology and some form of psychiatric training is offered to various classes. I merely want to indicate that in none of the medical schools is very definite interest being evidenced in this particular branch. We have to a certain extent some program of mental hygiene in existence in the State. Our Louisiana State Board of Health has, through the Parish Health Unit, I believe in thirty-three Parishes, some degree of mental hygiene and some moderate degree of health investigation. Locally, through the Orleans Parish School Board we have a shadow Child Guidance Clinic. I say "shadow" because obviously it merely scratches the surface, merely reaches one small group of individuals who are, according to Dr. Perkins' statistics, going to sooner or later demand of us treatment for some psychopathic or psychotic condition.

What has the medical profession done as a whole? This is not the first time papers on this subject have been presented to us. True, probably none had as detailed recommendations as Dr. Perkins' paper, but the topic has been mentioned, and considered, and forgotten. The family doctor, the general practitioner, is the man, in my opinion, primarily in a position to help in this situation more than anyone else. As a member of the family, these problems are seen early, these difficulties confided to him, and he is in a position to remedy the situation, if remedy is possible.

Probably most of these things have to be handled from the standpoint of preventive medicine by prevention of these situations rather than their treatment after their development. And so, the keynote that we should derive from Dr. Perkins' paper is that the time for discussion, the time for consideration of recommendations is long since past, and the time for action from the medical men—not from the laity—is at hand. The question I leave with you is how soon will you as general practitioners take active interest in this situation and encourage the establishment of some of these things Dr. Perkins recommends? And I believe I can say without fear of contradiction, among others, construction of another psychiatric institution in this State.

Dr. Fred J. Mayer: Dr. Perkins' paper points out the vital necessity of public instructions in mental hygiene and the necessity of hospitalization.

The public certainly needs to be instructed in the necessity of sterilization if the wave of insanity, especially criminal insanity, is to be stopped at its source.

Dr. Erwin Wexberg (New Orleans): I wish to



beg your pardon for speaking to you as I am not a member of your Society, but the topic of this discussion is of so important a nature and of such outstanding importance, especially as far as my work is concerned, that I really felt it necessary to say a few words.

Mental hygiene is to be viewed in our time as a medical problem, and therefore, I believe general practitioners ought to try to find some new kind of approach. According to my experience in mental hygiene in Europe, I found more and more that its chief point is a problem of education. Medical work concerns those in whom the damage is already done, but in many cases, not to say in all cases, it will be too late then. The prevention can be done and must be done as far as possible at the time when there is no damage as yet, when there is no symptom of bad development, and this is the case in education of the normal child. I believe that this education of the normal child should not be left any more entirely to the guidance of the parents and lay educators. I believe the general practitioner should view it as his task, that is to say, to help in this task of educating the normal child. This seems a most important method of prevention in mental hygiene. This kind of knowledge which is to be found in the majority of literature on the medical approach will not do. Certainly, some knowledge of modern educational problems, about modern kinds of treatment of children even before there are any symptoms of mental deficiency belongs to the scientific outfit of the general practitioner, and in this way he will have more possibility of acting and contributing to the prevention of mental diseases, than anybody else.

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## THE EFFECTIVENESS OF TYPHOID VACCINE IN THE CONTROL OF TYPHOID FEVER\*

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Numerous articles bearing on the efficacy of typhoid vaccine in the prevention of typhoid fever have been written, but there is little satisfactory statistical data available for the civilian population. The most complete data available on the subject are those of the Army and Navy.

Typhoid prophylaxis was made compulsory in the U. S. Army by War Department General Order No. 134, September 30, 1911, and in the

U. S. Navy by Navy Department General Order No. 133, December 1, 1911. The statistics of both the Army and Navy show there was a marked decline in the incidence of, and the death rate from, typhoid fever in the years immediately following the time typhoid vaccine was universally administered to members of these armed forces and that these rates have continued lower than for the nation as a whole.

The death rate from typhoid fever in the U. S. Navy dropped from 24.43 in 1911 to 3.23 in 1912. With three exceptions, in 1913 when it rose to 6.07; in 1920 when it was 4.26; and in 1933 when it was 2.71, the typhoid death rate has remained below 2.0 since 1912—a period of 22 years. For the years 1914, 1916, 1924, 1925 and 1926, no deaths from typhoid fever occurred in the Navy. The gross mean strength of the Navy during this period was approximately 3,055,092, or an average of 138,868 per year.

In a paper read at the Third Annual Meeting of the Southern Branch of the American Public Health Association in San Antonio, Texas, November 14, 1934, Surgeon General Patterson of the U. S. Army, stated that there were only 1529 cases of, and 227 deaths from, typhoid fever in the Army during the World War period (1917-1919 inclusive); whereas, if the same rates had prevailed as prevailed during the Spanish American War, there might have occurred 623,607 cases of, and 65,313 deaths from, typhoid fever among those troops.

These are remarkable records and, inasmuch as disinfection of water supplies, sanitary precautions, and a certain amount of control of milk and food supplies, all antedate the compulsory typhoid prophylaxis in the Army and Navy, indicate that typhoid vaccine has been an important factor in reducing the rates.

On the other hand, some of the larger cities of the country like Philadelphia, Chicago, Baltimore, Richmond and Washington, D. C., which used to have a very high death rate from typhoid fever, with frequent epidemics, now have a very low death rate without universal typhoid prophylaxis being administered to the residents. Using the Bureau of Census figures and comparing the year 1913 and the year

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\*Read before the Louisiana State Medical Society, New Orleans, April 29-May 1, 1935.

1932, the number of deaths which occurred from typhoid fever in these cities are as follows:

	1913	1932
Baltimore	137	6
Chicago	243	26
Philadelphia	257	26
Richmond	27	5
Washington	57	8

Comparison of the typhoid death rate for the same cities for the years 1920-1930 shows the following:

	1920	1930	Decrease
Baltimore	4.7	3.6	1.1
Chicago	1.1	0.6	0.5
Philadelphia	3.4	1.0	2.4
Richmond	6.4	2.2	4.2
Washington	6.6	3.5	3.1
Average	4.44	2.12	2.26

For the year 1930—Jacksonville, Fla., Kansas City, Kans., Patterson, N. J., Peoria, Ill., San Diego, Calif., South Bend, Ind., and Worcester, N. Y. reported no deaths from either typhoid and paratyphoid.

The operating factors which seem to have been largely responsible for the decline in the cities and the country as a whole are, purification of water supplies by chlorination and filtration, safeguarding milk supplies by pasteurization and other means, extension of sewer systems, the building of sanitary privies, and education.

Let us now look at the matter at closer range and see what has happened in Louisiana. For a number of years the Louisiana State Board of Health, in its drive to cut down the incidence of typhoid fever, has been supplying physicians and Health Departments with typhoid vaccine. As a result, large numbers of the population have been given typhoid prophylaxis.

The disastrous flood of 1927 left the citizens as a whole in straightened financial circumstances. The drouth of 1931 and two overflows of lesser magnitude—one in 1929; the other in 1932—further complicated the situation—and to cap the climax, came the depression.

For obvious reasons the main reliance was

placed on typhoid vaccine to control the typhoid situation in Louisiana. There has been a drop in the Louisiana death rate, but the decline has been gradual and is not as abrupt as it would seem reasonable to expect in view of the number of anti-typhoid vaccinations which have been administered. Other measures such as purification of water supplies by chlorination and filtration, inspection of food and milk supplies, installation of new sewer systems, extension of old systems, and the building of sanitary privies have gone on concurrently with the vaccination program, but not to the extent that would have been the case had the financial position of the citizens enabled them to provide the needed safeguards to render their homes sanitary.

The following table shows the number of cubic centimeters of typhoid vaccine distributed in Louisiana for the five-year period 1930-34.

Year	Population of State	C.C. Typhoid Vaccine sent out	No. of Complete Vaccinations Based on 3.5 c.c. per Complete Vaccination
1930	2,109,000	573,700	163,914
1931	2,125,000	666,270	190,360
1932	2,138,000	799,445	228,410
1933	2,153,000	901,220	257,490
1934	2,153,000	634,630	181,320
	10,678,000	3,575,265	1,021,494

From this table it will be seen that during the five-year period 1930-1934 the State Board of Health distributed 3,575,265 cubic centimeters of typhoid vaccine to the physicians and Health Departments. Making a liberal allowance for some breakage in shipment, some unused, and for those persons who took one or two injections and did not return to complete the treatments, and basing the calculations on a requirement of 3.5 c.c. per complete vaccination, this quantity was sufficient to vaccinate 1,021,494, or one out of every ten persons in the gross population of 10,678,000 in the state for the five-year period. The vaccinations were not evenly distributed over the state. In one area, the number vaccinated approximated 62 per cent and dwindled to 7.9 per cent in another area. This is not all of the vaccinations ad-

ministered as no account is taken of the amount of typhoid vaccine supplied through commercial sources. Comparison of the death rates for the different areas shows that during the five-year period 1930-34 there was no marked difference in the average rate of decline of typhoid deaths in the two areas, being 5.44 in one, and 6.86 for the other, while the average decline for the state as a whole was 5.60 for the same period.

Our records disclose a number of instances where typhoid vaccine failed to give protection against typhoid. However, in going over the communicable disease report cards it was found that on 90 per cent of the cards the question as to previous vaccination against typhoid fever was left unanswered. So, it will readily be seen that these records are far from complete.

PARISH	1930	1931	1932	1933	1934	Five Year TOTAL
Allen		1				1
Avoyelles	1	23	7	3	2	36
Eienville	1	4			1	6
Caddo	1		1			2
Calcasieu			1			1
Catahoula	6					6
Claiborne					1	1
DeSoto					1	1
Evangeline		25	26			51
Franklin	7	24	31	27	5	94
Grant				1		1
Iberia	1	2		1		4
Iberville		1				1
Jackson				1		1
Jefferson Davis				1		1
Lafayette	6	1		1		8
Lafourche		2		1		3
Morehouse	1			1		2
Ouachita	2					2
Pointe Coupee		1				1
Rapides				1		1
Red River		1		3		4
Richland					2	2
St. Landry			1	5		6
St. Mary				1		1
Terrebonne				11	20	31
Union		6	2	3		11
Webster		2	3	1	1	7
W. Baton Rouge				1		1
West Carroll	1		4			5
Winn			1			1
	27	93	77	63	33	293

Cases of Typhoid in Previously Vaccinated Per-

sens. State of Louisiana. Five-Year Period 1930-1934.

Table 4 shows the number of cases of typhoid in previously vaccinated persons by parish and by years for 1930-1934, of which we have record.

Of the two hundred ninety-three (293) known failures which occurred during the five-year period, two hundred twelve (212) occurred in four parishes, distributed as follows: Avoyelles, 265 cases with 36 failures; Franklin, 285 cases with 94 failures; Evangeline, 129 cases with 51 failures; and Terrebonne, 101 cases with 31 failures. Why the number of failures is so great in these four parishes is a moot question.

My own view is that these parishes have a long history of typhoid prevalence and that the failures have been more fully reported than in the other parishes.

The vaccine used is a mixed vaccine with a straight count of:

One billion (1,000,000,000) typhoid

Seven hundred fifty million (750,000,000) paratyphoid A

Seven hundred fifty million (750,000,000) paratyphoid B

The seed cultures are obtained from the U. S. Public Health Service and American Type Culture Collection McCormick—(Rawlins Strain 167).

The vaccine is manufactured in the State Board of Health Laboratory under the direction of Dr. W. H. Seemann, City and State Bacteriologist. Standard methods are used and the U. S. Public Health Service exercises the same supervision over the manufacture of this vaccine as is given all other manufacturers of typhoid vaccine.

The officers and men of the Army and Navy live under hygienic conditions far superior to those of the average citizen. The drinking water is treated. The milk and food supplies are under constant supervision and inspection. A safe method of excreta disposal is enforced. Every activity of these men is charted and supervised while on the military reservation and, to some extent while absent or on leave. Even

during the World War period these protective measures were carried out in an amazingly high degree. Additionally, all applicants for entrance into those military organizations must pass both a mental and physical examination before being inducted into service. Therefore, the physical fitness and mental rating of the armed forces should be well above the average for the civilian population as a whole.

In his paper read at the San Antonio, Texas, meeting, Surgeon General Patterson further points out that during the calendar year 1933 it is estimated that there were 450,000 men in the Civilian Conservation Corps camps at various times and that the average strength for a 39 week period was about 223,000. These men were examined at the Army stations, vaccinated against smallpox and typhoid, and sent to 1,000 camps throughout the country, many of which were located in endemic typhoid areas. Among this entire group there occurred fifty-four (54) cases of typhoid fever, with four (4) deaths. Twenty-nine (29) cases and one (1) death occurred in a Texas Company, where working parties had used untreated water from shallow wells, under very unsanitary conditions, in spite of the fact that food and water were taken to these men by truck daily. According to the Inspector's report there was a water course, consisting of many stagnant pools, in the ravine near the camp site, and some of the men drank water from a spring located on the northern slope. Others waded and bathed in the stagnant puddles on the work site, although they admitted having been warned against the above. A few inhabitants lived along the ridge, poor people without any sanitary conveniences, and wastes of every description were freely thrown out or placed on the surrounding ground. In one house, a year previous, there had been two cases of typhoid and one death.

This brings up the question as to whether or not sanitary conditions, especially safe water supplies and sanitary methods of excreta disposal, physical and mental fitness, and the supervision of the daily routine of individuals are greater factors than is generally appreciated.

#### SUMMARY

Owing to the limited time at my disposal, I

have rather sketchily presented the facts. The statistical data available for analysis is rather meager and no claim is made for a scientific presentation. My personal opinion is:

(a) That typhoid vaccine offers a very considerable protection against typhoid infection; this opinion, being based on Army and Navy experience.

(b) That it is a useful adjunct to a sanitation program, but cannot be relied upon to protect against mass infection nor grossly insanitary conditions.

(c) In short, vaccination is not a dependable substitute for sanitation—and by sanitation I mean all that the word implies, clean, safe water and food supplies and sanitary disposal of human wastes.

#### DISCUSSION

Dr. W. Carroll Summer, (Minden): It is indeed a pleasure and privilege to open the discussion of Dr. Todd's paper. Since the typhoid vaccine has been given on such a large scale in the rural communities all over this state and other states, the question has often arisen as to how effective is this work, or is it worth while to continue to educate the people to take the typhoid vaccine.

The results obtained in the Army and Navy as shown in Dr. Todd's paper must be considered with due allowances as these men are selected from the physically fit of the country and live under the most hygienic and sanitary environment.

The people in our rural sections, where typhoid fever is endemic, frequently live in most insanitary environment. The water supply is not safe, open wells with a rope and bucket are used. The houses are not screened. The excreta is not disposed of in a sanitary way. Flies are very prevalent. A rural census was made recently in Claiborne parish, which is typical of the other parishes in this state. I use Claiborne because it is the only parish in the state in which this farm census was made. 4,118 farm houses were surveyed. Nineteen per cent had water indoors supplied by pumps and 2.5 per cent had water piped in the houses, while .78 per cent had flush toilets. In other words, rural people as a whole do not have the protection that the city or urban dweller have thrust upon them. The rural people depend on the typhoid vaccine to protect them against typhoid fever more than they do a pure water supply and a safe excreta disposal. If these people do not take the typhoid vaccine for protection, more than



likely typhoid fever would be much more prevalent than it is now.

During the years 1932 and 1933, 14,000 people were given the triple typhoid vaccine in Webster Parish. This represents almost 50 per cent of the total population of the parish, which is approximately 30,000 people. The number of cases of typhoid fever dropped to six in 1933, while there had been nineteen cases in 1932 and thirty-two cases in 1931. The sanitation and the protection of the water supplies have gone forward steadily during the biennium; but I firmly believe that the wholesale administration of the typhoid vaccine was an important factor in reducing the incidence of typhoid fever.

The immunity that is afforded after the typhoid vaccine has been given varies in degree and duration, according to Rosenau. It comes on gradually and is developed about one week after the third injection. We have no laboratory procedures to determine the degree or duration of the immunity. Various anti-bodies appear in the blood which persist for a varying time. Agglutins outlast the others and persist for two years or even longer in some cases. There are factors involved in the immunity, which are not fully understood. The only index that we have as to how well the individuals are protected by the vaccine is whether or not they develop typhoid fever after the inoculations. The vaccine should be taken every two to three years by those who live under conditions which are inductive to typhoid fever. The more insanitary the environment, the more often should the typhoid vaccine be taken.

As Dr. Todd said in his paper, the control of typhoid fever must not rest solely on taking typhoid vaccine. It has been definitely shown that when the typhoid vaccine is given after exposure to a case of typhoid fever and before the symptoms appear in the exposed individual, the duration and the severity of the disease are made less. If typhoid vaccine is given after the symptoms develop, in most cases no favorable results have been noted. I have in mind the case of a young man, about twenty years old, who took the three inoculations of triple typhoid vaccine at weekly intervals. About one week after the last injection he came down with fever which lasted for two weeks. This fever was diagnosed as typhoid by the attending physician and it was his opinion that if the young man had not taken the typhoid vaccine, his case would have been more severe and the disease would have lasted longer.

In closing, permit me to state that I have enjoyed Dr. Todd's very interesting and instructive paper. I agree with him that the control of typhoid fever must not be based solely on typhoid

vaccine; that the typhoid vaccine does not protect against mass infection; that to control typhoid fever in endemic areas, the water supply must be protected, the excreta must be disposed of in a sanitary manner, flies must be suppressed, other sanitary improvements instituted, and the rules of personal hygiene instituted, in addition to the immunization with the triple-typhoid vaccine.

I would like to ask Dr. Todd one question: Are there any statistics available from other states showing the number of cases of typhoid fever which have had the typhoid vaccine during the preceding two or three years?

Dr. W. W. Poimboeuf, (Franklin): Dr. Todd has given us a very interesting paper. His statistics have shown that typhoid vaccination without sanitation is not a sure prevention against typhoid fever.

In the data on prevalence of typhoid in the various Parishes the records in St. Mary are not complete but beginning in 1932 they give the following information:

In 1932 there were 13 cases reported among whom one had had one half c. c. of vaccine; one had had complete vaccination 12 months prior to becoming ill. There were no deaths reported but two of the cases were sent to Charity Hospital and records were not available as to whether these two cases died.

In 1933, 7 cases were reported; two had had vaccination in 1932; two were vaccinated in July 1933 and became ill in August 1933. There were two deaths, one of whom had been vaccinated.

In 1934, 6 cases were reported, one of whom had been vaccinated two months prior to becoming ill. There was one death in an unvaccinated person.

So we have for those three years, 26 cases reported, six of whom were vaccinated. There were three deaths, one in a vaccinated person. This shows that 23 per cent of the cases reported were vaccinated within one year prior to their illness.

The statistics given show that typhoid fever occurs more commonly than we have been believing among vaccinated persons but that the death rate is much lower. We are led to believe that following practically all cases of typhoid there is a lasting immunity. I would like to ask Dr. Todd if he can explain why there is such a difference. Is it because of the change in the toxin in the preparation of the vaccine, or is it that we should give more of the vaccine at each injection or more injections to complete the prophylaxis?

I enjoyed his paper very much and agree with him in his opinion that since typhoid fever is a filth borne disease and vaccination is not completely successful, it can only be controlled by vaccination accompanied by complete sanitation.

Dr. Geo. F. Fasting, (New Orleans): It is

my privilege, in my connection with Charity Hospital, to see a number of typhoid cases that come to the hospital. They are sent to me for blood cultures or serologic tests, and I have been shocked to note the large representation from certain parishes of this State. This is in accord with the statistics outlined in this paper.

It is surprising why they continue to use the vaccine method as they do. I understand the Public Health Service of the United States has given away considerable quantities of mixed vaccine to fight typhoid.

Paratyphoid A is not the disease that occurs in the United States; it does occur in Europe. Paratyphoid B is what we have in this country. Immunization against paratyphoid will not protect against typhoid. The paratyphoid is a relatively mild infection and there is no benefit from the use of vaccine against it. I think the United States Army and Navy have done well in getting away from paratyphoid A and B vaccine.

It is difficult to get the population in for considerable vaccine injections. The smaller one can make the number of inoculations, the larger the number of people one is likely to get. We could probably use two injections, using the dosages employed in the second and third injections. I would suggest that the paratyphoids be left out and more typhoid substituted.

It is surprising to note that family providers constitute such a large number of the cases coming to Charity Hospital. I believe statistics should emphasize the numbers of adult men. With such information we should be able to carry on a better campaign in a parish. It is worth while to reveal to a community the loss of family providers, and the particular burden this is on the State. We may have to use the Mussolini system of giving health orders.

Some day this State will wake up to find millions of dollars lost because typhoid has struck a certain industry. This State cannot afford to have a bad name attached to it, because of a disease.

The death rate of typhoid has not improved as much in the South as it has in the Northern States. What is the reason for that?

We know little more about typhoid than we did ten years ago. All well water, used for public consumption, comes under the supervision of the State Board of Health. It is difficult to have the public realize the advantage of examining the water supply of each individual house, yet in the parishes, where we have a large number of typhoid cases, all the water supply should be examined, and we may have to do it.

Dr. W. H. Seemann, (New Orleans): I am very glad indeed that Dr. Todd selected the subject on which he has written. I believe the Health De-

partment and doctors are somewhat to blame for the excessive confidence people have in typhoid vaccine. I believe it is a very valuable agent and has served a good part in the fight against typhoid fever. However, people have the impression that the vaccine gives a permanent and complete immunity such as they have learned to expect from the use of vaccination to protect against smallpox.

Anyone who follows up the statistics from General Patterson's article, available in the Journal of Public Health, will notice the few cases that occur in the armed forces of the United States. A great majority were among those soldiers and sailors who had been on shore leave, and who were on leave for a certain period of hours or days and had been living on an ordinary civilian status during these periods. There is no question in anybody's mind that typhoid vaccine does not have the same effect, or effective period, in civilian life that it does in military forces where there is supervision of food, etc.

In regard to the vaccine used, the Navy was the first to break away from paratyphoid, and now depend upon increased dosage of typhoid. More recently, the Army has practiced the same method. I do not know whether the Public Health Service has made any official announcement of change. When dealing with Public Health matters, we do not have the same latitude of experiment that a private individual would have. We had accepted tripple vaccine all over the country and it was approved by the Public Health Service. This is unquestionably the proper procedure and various health authorities follow that lead. I believe, as Dr. Fasting has said, there has been some waste of material and time, but I do not believe this is the rule. In certain parishes of this State, on account of conditions which have not been definitely brought out by Dr. Todd for lack of time, they have better results than they have had in other Parishes. I believe typhoid vaccine has been of immeasurable benefit to Louisiana. There were times before the Parish Health Units inoculated when typhoid was quite a common thing winter and summer throughout the State.

I believe the point brought out by Dr. Todd that sanitation is of greater importance than vaccine should not be neglected. People should not be deluded with the idea that because they have had typhoid vaccine, they need not bother with other measures.

Dr. Fred J. Mayer:—There can be no question as to the value of typhoid vaccine in the control of typhoid fever, but it must never be substituted for sanitation as the first line of defense.

The late treasurer Smith of Ruston stated that a single lecture on the evils of shallow wells and other polluted water sources started a movement



for the establishment of water-works and *pari passu* with the use of a sanitary water supply, the annual appearance of typhoid fever and other bowel troubles due to colon infection disappeared and that the town has been free ever since; a well is really a drainage ditch, draining an area four times its depth.

In New Iberia, where a case of yellow fever broke out in 1906 the vigorous sanitary measures directed against the yellow fever case, which included the oiling of wells and cisterns and other possible drinking sources put an end to the typhoid outbreak; incidentally of course, the general cleaning up got rid of many flies possibly infected.

## WHO IS TO BLAME FOR CANCER DEATHS?\*

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The implications in the question, "Who is to blame for cancer deaths," are two in number: first, that there is blame to be attached somewhere for the mounting number of deaths, and second, that there is something which can be done to prevent some fraction of these deaths.

On sufficient evidence there can be no further controversy over the demonstrated fact that the number of deaths reported as due to cancer is on the increase. We would like to know statistically whether this is due to better recognition of cancer as the cause of death in these cases and that they are being reported more accurately, or whether there is an actual numerical increase in the number of persons developing cancer. Without entering more fully into the discussion at this time it can be said that the impression is gaining ground that both factors are operating. That is, physicians are diagnosing and reporting more cancers as the cause of death and that with the lengthening of the span of life more people are living longer in the years when cancer is more common. The latter conception is embraced in the general statement that our population is growing older.

Present knowledge about cancer cannot per-

mit immunity from blame for cancer deaths because of either of the above reasons, for the very recognition of the fact that more cases are being reported and more people live into the so-called cancer age should be a signal to us of increasing probabilities for the development of this disease.

Before any accusation can be made against any one for permitting a high cancer death rate it is necessary to convince ourselves that the death rate level is capable of being reduced by deliberate effort.

In attempting to confirm or deny this consideration it is necessary to state at the outset that the most important causative factors in the origin of cancerous processes are not known (cancer and cancerous processes are used throughout this discussion as synonymous with malignant tumors and malignancy). What is known about the disease is a series of isolated segments of its natural history. There are probably no better observed and recorded pictures of any pathological processes than those of the many types and behaviors of the cancer cells. Unfortunately, these well known fractions of the story still hang together by nothing more tangible than a further series of special and general hypotheses which have not been proved.

Until demonstrable proof can establish the truth of one or more of the postulates which will explain the origin of cancer cells and link up the now widely separated segments of their growth and behavior, the natural history of cancer cannot be written. With this admission it becomes doubly necessary to investigate what is known about cancer in order that our question may be answered with conviction.

Cancer cells are biologically different from the tissue cells from which they originate. Although they often simulate morphologically their tissues of origin they possess little of the fully coordinated functional relationships of an organized whole. Bone, cartilage, muscle, epithelium, endothelium, may all appear in a cancerous growth but functionally these tissues are poor imitations of normal tissues. It is this element of a changed organization, as compared to the functioning perfection of normal tissue, which is the outstanding character of malignan-

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cy. Although the tumor mass possesses its own organization it is not in normal equilibrium with the tissues of the host. This is evidenced by its phenomena of growth. From this observation have grown up a number of conceptions which are supposed to be descriptive of the independent behavior of cancer cells. They are called unrestrained, wild, invading, youthful, embryonic and malign. Much that is erroneous has crept into the connotations connected with these terms but they serve well to express the idea of disharmony with the host.

This is the most certain generalization we can make about the functional aspects of malignancy. It is evidenced by such discrepancies as gland arrangements which could never function as glands; secretions which from normal tissues would be external, poured into closed spaces from which there is no egress; cartilage where no cartilage is needed and bone where there is no use for it; secretory activity without demand and cells of secretory tissues which produce no secretions; cells of incomplete functional maturity reproducing their kind, which grow and reproduce in turn, but never fulfill their highest function.

Of the reasons for such delinquency of cellular behavior practically nothing is known. We can do no more than accept the dictum of Goethe that "In Nature, nothing is spontaneous; everything has its origin," and continue to seek the explanation in some factors which inhibit, stimulate, disorganize, restrain, propell or alter in some way the functional and morphologic character of some cells in an equilibrium and cause them to partake of the characteristics of malignancy.

The first wide gap in the natural history of cancer appears when we attempt to explain the mechanisms by which certain suspected effective causes operate to produce the demonstrable functional and structural changes of the precancerous and early cancerous tissues. Much criticism is still leveled at the failure to explain how these processes operate and the critics hesitate or refuse to accept the wealth of presumptive evidence in favor of the connection. On a strictly scientific basis such skepticism is correct but evidence appears to be sufficient

to permit a good scientific guess that many of the suspected factors are actual effective causes.

From the nature of the earliest changes in tissues which begin to show malignant change there is a strong feeling that the originating factors lie outside of the developing tumor. That is, although there may be some intrinsic weakness in the elements or in the whole organization which favors malignant change, the precipitating factors are external to it.

The most generally accepted external operative factor is chronic and prolonged irritation. The term irritation itself explains little other than the conception that some form of stimulation is operating in a repeated insistent manner to produce undesirable results. Irritants may be placed in two broad categories, physical and chemical. If in the former we allow for the inclusion of the subatomic forces of radiant energy, and in the latter the manifold products of vital activity and cellular death, the two categories will embrace all known forms of energy exchange. These, it is believed, act as external environmental factors which alter the behavior of tissue cells and cause them to become malignant.

Empiric data support this contention without attempting to explain the mechanisms. Irritation, however, is largely surmised and is understandable only through its effects.

A casual relationship has long been read into the occurrence of buccal cancer from the irritation of the mucous membrane of the mouth by jagged teeth and ill-fitting dental plates. This is interpreted as being due to a physical irritant. The short-stemmed clay pipe is held responsible as one cause of cancer of the lip: a reaction to a thermal irritant. More recently the actinic rays of sunlight have been suggested as a possible factor in producing cancer of the protuberant lower lip.

Old lacerations of the cervix uteri are held suspect in the etiology of cancer of the cervix; gall stones are presumptive forerunners of gall-bladder malignancy; the repeated bombardment of the restricted portions of the esophagus by hot and coarse foods is held by some as a possible factor in cancer of that organ.

Chemical irritants are believed to be operative

in such instances as cancer of the bladder occurring in workers in anilin dyes; tar cancers due especially to the refined tar distillate dibenzanthracene; acid discharges from chronic inflammatory processes; lactic acid accumulation in milk glands; alterations of secretion and cellular activity in response to hormones; vital products of bacteria and higher parasites. In some of these evidence of the connection between the cause and effect rests on experimental grounds and in others on strong clinical correlation. Thus, as pointed out by Ewing, there can hardly be any question but that the malignancies appearing in the early workers with the x-ray and radium were due to these energies or that the teratomatous cancers produced by the injection of zinc-chloride into the testes of cocks were the direct result of this procedure. We have further the experimental production of tar cancer in rats by Slye and the inoculable tumors of Rous produced by the injection of a cell-free filtrate of previously developed tumors of the same kind.

Clinically there are several pathologic conditions due to known causes which are so prone to develop malignant characteristics that they justify the term, "precancerous" lesions. Leukoplakia of the mouth, chronic cervicitis, benign polypi of the bladder, nevi and pigmented moles are a few of those conditions in which the probabilities of their developing malignant elements are so great as to warrant the use of the term if not too strictly applied. But again we are faced with a hiatus between the relatively quiescent state of these benign lesions and the period of accelerated growth of malignancy. Nevertheless, if the suspected connection between the two states be true, there must be an adequate cause to explain the transformation.

This too must wait further investigation.

Reasoning from the principle of cause and effect it is possible to say that to oppose or obstruct a cause is to prevent or dissipate its effects. Since cancer possesses a natural history in which cause and effect apply throughout all its developmental stages it cannot differ in this respect from any other natural phenomenon. Prevention in cancer must rest therefore in attempting to interrupt its processes at any avail-

able vulnerable points in its natural history. In view of the nature of malignancy it is preferable that this interruption occur at some place or places as near to its origin as possible. Most satisfactory of course would be the prevention of all factors operating on normal tissues which have any potentialities for initiating malignant change.

It is on the application of this logical principle to the established or suspected isolated links in the continuous chain of cause and effect running through pre-malignancy and malignancy that it can be said that the terminal event of death from cancer can be prevented. If all that is now known about the probabilities of the development of cancer could be marshalled before us and every known opportunity for influencing these probabilities could be utilized effectively it is certain that many cancers would never develop and more would never progress. It appears that this assumption is so firmly entrenched in experimental evidence and clinical experience that it amounts to a scientific conviction.

This is summed up in the broad statement that cancer is preventable and cancer deaths are even more highly so.

The writer is in agreement with the principle that cancer is not a single entity. This belief is strengthened by the wide variation in etiology, morphology, and function or physiology between the different types of benign and malignant tumors. In every particular instance in which we set out to prevent the ultimate outcome from malignancy the specific characteristics of the type of malignancy actually encountered or anticipated must be taken into consideration. This means that in our present state of limited knowledge preventive efforts cannot be hoped to be applied against a single cause but that we must select that point of attack which appears most vulnerable, economic and practical and from which most rapid, effective results can be expected.

The statistics show that an increasing number of deaths is occurring from a disease in which it has been demonstrated that there are preventive possibilities. On the other hand there is no evidence available to show how many can-

cer deaths have been prevented. The results tabulated for five and ten year cures following operation account for a not inconsiderable number of avoided mortalities. Aside from these averted cancer deaths it is safe to assume that many others have been prevented by known effective measures, such as early treatment or removal of pigmented moles, bladder polypi, lacerated and infected cervixes, buccal leukoplasias and chronic skin affections. Until we can know more accurately the mathematical probabilities for the development of malignancy from these benign lesions this probable fraction of prevented cancers cannot be measured.

At present we can state with rather definite assurance that if we continue to permit the continued operation of the suspected factors in the etiology of this disease it is likely that the probabilities that cancer will develop will be high enough to have significant bearing on the number of cases of cancer and of cancer deaths.

No one who is familiar with the present set-up in regard to the efficiency of medical service given to patients can believe that all or even a major fraction of known preventive possibilities are being applied. There is a great lag between knowledge and application in this branch of medicine.

Possibly the discussion to this point has been sufficiently conclusive to state without question that cancer deaths are not inevitable, that effective preventive efforts against the disease are known, and that there is evidence of failure to apply the knowledge of how cancer deaths can be prevented. If such is the case the question, "Who is to blame for cancer deaths?" should be open for an intelligent answer.

The nature of the known facts of the natural history of cancer makes it certain that the most efficient measures against it must be taken early. The earliest possible measures known are those which can be applied before malignant changes make their appearance. Since the control of cancer must rest with those who have the necessary knowledge concerning it this can only mean that the practicing physician must see his patients before malignancy occurs. The opportunity for this is given the physician in the cases of patients for whom he is caring for non-can-

cerous conditions. The doctor who delivers a woman in childbirth can restore the relationship of torn structures, the attendant on a woman with gynecologic conditions can be continuously aware of cervical and uterine abnormalities, the physician called upon to treat diseases of the skin can recognize those conditions which carry a high potentiality for malignant change. But above and beyond these special opportunities the general practitioner has the responsibility to his patients for complete medical service which should prevent him from such blindness as to ignore a pigmented mole or a lacerated cervix when he has been called upon only for the treatment of constipation.

In other words the doctor is the only one in a position to become aware of the presence of those causes which, if allowed to operate, may produce cancerous changes, to reveal conditions already developed which have a high potentiality for becoming malignant, and to discover malignancy in its early stages. In order that such reasonable practice as this may have an appreciable effect in lowering the incidence and deaths from cancer it must be widely applied. Every physician must consider the possibilities of potential or apparent malignancy in every case. This does not mean that he must do so only when presented with suspicious subjective or objective evidence but that he should assume the responsibility and even worry, of assuring himself that in each patient there is not now or likely to be soon any cause for concern. That this is not the present point of view of the average physician, and that this practice is the only certain way of reducing the cancer problem, places the larger share of the blame directly upon the profession. Most persons call upon a doctor at some time and that time is the opportunity for the physician to initiate his program of effective medical service.

It is frequently argued that so much emphasis on cancer in apparently well or otherwise sick patients will produce neurotics and cancerophobes. The answer is that this may occur if the physician is so ignorant of the patient's intellectual and emotional make-up that his handling and judgment of the individual is tactless and therefore non-medical.



There are some mitigating circumstances which relieve the doctor of some of the blame for cancer deaths. People are ignorant, unco-operative, prejudiced, secretive and fearful and it is at times impossible to get such individuals under a doctor's care or to carry out such measures as may be indicated for them. These factors can be overcome only by training and education and here the medical profession must assume most of the responsibility.

The broadly educated, intelligent, articulate and it is to be hoped, literary physicians are the best assurance that the cancer problem can be resolved. Blame for cancer deaths rests lightly on the general population at present, for the public is not yet educated to the point where its individuals consider future illhealth while they are well. Until they do realize that good health can be bought and cancer can be prevented the physician has the double role of teacher and protector, and in many instances his errors of omission must throw most of the blame for cancer deaths directly back upon himself.

#### DISCUSSION

Dr. A. E. Fossier (New Orleans): It is indeed a great privilege to have the occasion to discuss this most interesting paper of Dr. Perkins. It is a hard one because Dr. Perkins has presented his thesis in a very masterful way. He has left out nothing, given me practically nothing that I can find to add, nothing that I can criticize.

It is problematic whether there is or there is not an actual increase in cancer today. I will explain what I mean by this statement. I do not think that cancer has increased in the early age group. The ratio of cases of malignancy in individuals younger than forty-five is about the same as it was fifty or one hundred years ago, despite the fact that more cases are reported now than ever before. The reason undoubtedly is that the recent advancement in our diagnostic methods has brought to light many cases of cancer which formerly were overlooked and falsely diagnosed, among which may be mentioned cancer of the lungs.

Yet in recent years the death rate from this disease has increased in almost all the world. To some extent this is normal because of the marked progress in life saving in the lower age groups more persons now attain the age at which cancer is most prevalent, that is the period of life past forty or fifty. Thanks to the recent advancements in medical science, the world has aged considerably.

But this has caused a numerical increase in the number of potential cancer cases.

A study of the vital statistics of the Board of Health of this City shows that since the year 1850 (the earliest available time for which we have statistics) to this date, there has been a progressive increase in deaths occurring above the age of fifty. During the decade 1850-1859, only 7.9 per cent of the total deaths were of individuals older than fifty years, or 92.1 per cent of all deaths occurred in persons before they reached their fifties. But what a change in the past years! In 1933, 48.9 per cent of the total deaths were in the age group above fifty years, or we may say, 51.1 per cent in the lower group, or in persons less than fifty years. It may be interesting to know that the percentage of deaths occurring in the ripe old age of the eighties is approximately the same as the mortality of those who had passed their fifties during the decade of 1850-1859.

In the past thirty years a gain of ten years in longevity has taken place. For instance, during the decade of 1900-1909, 32 per cent only of the total deaths were above the age of fifty, while the year 1930 showed that 31.2 per cent died after they had reached their sixtieth birthday. If we go back to 1870, the percentage of deaths above the age of fifty was 19.5 per cent while in 1930 it was 18.8 per cent. These figures show how much older we are living today and should prove that the increase in our cancer mortality is due to our aging population.

It may be rational to say that in spite of our efforts to cure and prevent cancer, as our population ages more, we may look forward not to a reduction in the death rate in cancer, for cancer as well as the degenerative diseases so-called and senile pneumonia, must increase the older we die.

Until we find the cause of cancer, as well as a specific for its cure, I cannot see much hope for great improvement in that respect. The picture is not a gloomy one, for despite the fact that more die of that dread disease, it is because science has increased our span of life.

Dr. Perkins tells us that the responsibility in many instances rests upon the shoulders of the physician. That is true, as well as the essayist's saying that "Until they (the people) realize that good health can be bought and cancer can be prevented, the physician has the double role of teacher and protector." The profession fully realizes its responsibility in that instance. The population is being given every chance to educate itself concerning the prophylaxis of cancer. Lectures, radio talks, newspaper articles, etc. are continuously being used in this fight, but until we have something definite and positive in the way of prophylaxis and cure, we cannot hope but to achieve a



passing interest in our educational campaign for the prevention of cancer. The work must be continued with increased vigor, for today many victims of that deadly disease have had their lives prolonged by the early recognition of the malady and by our present methods of treatment. Again, many potential cases of cancer were prevented by the means so ably enumerated in the learned paper of Dr. Perkins.

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TOXOID IMMUNIZATION:  
NEW ORLEANS CAMPAIGN FOR DIPHTHERIA  
ERADICATION\*†

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NEW ORLEANS

The most important single factor in the development and maintenance of national stability is unquestionably the safe-guarding of public health, for as Disraeli said: "the public health is the foundation upon which reposes the happiness of the people and the strength of the nation." From the beginning of history man has been taught by most distressing catastrophes that any disease which is capable of attaining epidemic proportions is not only an economic hazard to the community, but a direct cause of loss of life or of invalidism to great numbers of people, causing its effects to be felt long after its immediate control has been obtained.

Medicine has achieved many glorious victories in the field of health protection even before the advent of modern organized methods of cooperation; thus through the untiring efforts of the immortal Pasteur, rabies was conquered and untold numbers of lives saved, while the work and persistent efforts of Jenner banished from organized civilized communities the spectre of smallpox. But, though these successes are outstanding they did not afford the human family complete health protection; complete health protection requires the eradication of all diseases capable of assuming epidemic proportions, and while it is recognized that of such there are

many, diphtheria, with its ever-present "carrier" problem and the high percentage of susceptible children, stands foremost among these potentially epidemic diseases. To us who live in the present age it is indeed appalling that the death rate of diphtheria in the pre-serum age was over 55 per cent; nor can one easily appreciate that diphtheria is ever-present in every community. Yet to any one who gives attention to health questions, and especially to those of us whose chief function in life is the care and welfare of children, diphtheria represents a very serious menace, for it is well known that death is not the sole toll of this disease. Even where life is spared, many diphtheria victims, 20 to 23 per cent, retain the footprints of its influence upon the human organism in the form of many types of paralyses, the so called "post-diphtheritic paralyses", damaged hearts and various types of nervous disturbances, to say nothing of the economic loss to the family and community.

Efforts contributing to the development of adequate control of diphtheria date back to 1771, when Samuel Bard, an American physician, demonstrated that so-called membranous croup was, in fact, a clinical entity entirely different from ordinary croup, and represented a type of infectious disease. In 1821, Bretonneau published his classic essay giving to this specific contagious disease its present name, and with the development of the science of bacteriology, Klebs (1883) was able to identify the micro-organism whose presence was constant in this disease. The following year (1884) Loeffler succeeded in isolating this micro-organism, grew it on artificial media, and by inoculating it into abraded mucous membranes of animals, was able to produce the typical disease. This was by far the outstanding accomplishment in the eventual control of diphtheria, for it enabled von Behring to set himself the task of developing a specific serum which would successfully neutralize the toxins of the micro-organism and thus cure the disease. In 1890, von Behring announced his success to the medical world, and in 1892 his serum was given its first clinical tests upon a large scale. Although this serum proved its efficacy by an immediate reduction of the death rate in diphtheria, much propaganda was made

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against its universal use in the treatment of this disease; and, strange, as it may seem, objectors to its use were not limited to the lay population, but were found even among members of the profession. Gradually it was shown that whenever the use of serum had failed the reason was either too great a delay in its administration or the use of inadequately small doses. It remained for Dr. William Park to crystallize attention on the necessity of adequately large doses of serum administered early. To us who live in the present age it appears almost incredible that the death rate from diphtheria since the advent of proper use of serum therapy has been reduced from 55 per cent, the pre-serum rate, to less than 10 per cent. Thus diphtheria was placed entirely, or almost entirely under the control of the physician. It became necessary merely to administer the proper dose of anti-toxin sufficiently early in the disease for a complete cure to become the common and usual result.

With such creditable work and so complete a control of the treatment of the disease, medical science might have rested in content realization that the need of further work in the matter of diphtheria control was over. But such is not the story; Medicine, recognizing at all times its responsibilities to the public, continued on, hoping to achieve in the fight against diphtheria as much as has been accomplished against rabies and small-pox. The idea that diphtheria could be controlled by the development of active immunization with under-neutralized toxin-antitoxin was an original hobby of von Behring. This line of work was aggressively followed by many workers notably von Behring, Schick, Ramon, Park, Zingher, Schroeder and others, giving as the first concrete result the development of a substance to which was given the name "toxin-antitoxin". This material when injected into the bodies of susceptible children provoked an immunity or protection against the disease as proven by Schick tests, and its practical applicability was demonstrated on a large scale by Park, Zingher and Schroeder by extensive immunization in New York City.

The use of "toxin-antitoxin", however, did not give uniform, positive results; the duration

of immunity provided was not permanent, and moreover, there was considerable risk of provoking, in the patient, a sensitization against serums; that is, the patient became sensitive to further serum injections, so that if in later life it ever became necessary to administer any type of serum for therapeutic measures against other diseases such as tetanus (lock-jaw), very serious reactions and even death might result. For this reason many medical men hesitated, and others, including the writer, objected to the universal administration of toxin-antitoxin as an immunizing method against diphtheria.

Later, these objectionable features in diphtheria immunization were all entirely overcome as a result of the work of Ramon, whose investigations and experiments resulted in the development of so-called "toxoid". This product has been put to the most exacting investigative tests and it has been found by all workers and clinicians that its use provides complete protection or immunity against diphtheria without the production of any immediate or remote reactions whatsoever in children under 7 years of age, and with only slight reactions in rare cases when used in children of older ages, especially about the age of puberty; moreover, the duration of this immunity or protection is definitely lasting.

A consideration of the practical application of immunization against epidemic diseases exemplified by diphtheria brings to one's mind the fact that diphtheria is spread by two means; either there is direct contact with, or exposure to an active case; or, as in the majority of cases, there is contact with or exposure to a so-called "carrier." The question arises in the lay mind, what constitutes a "carrier" of a disease? There are two types of "carriers" of disease; first we have the so-called "convalescent carrier", by which is meant a patient who has entirely recovered from the disease from the clinical standpoint, but who still harbors the disease germs, and will continue to do so for a more or less indefinite period without presenting symptoms; and secondly, we have the true "carrier", that is, an individual who harbors the disease germs, but who is possessed of a sufficient immunity to prevent the germs from developing within his

body, and, therefore, does not develop the actual disease in the sense of exhibiting symptoms. These carriers are continually disseminating the disease germs they harbor and from time to time are responsible for the development of new cases among their susceptible contacts; occasionally they are directly responsible for the outbreak of an epidemic.

Whatever is said concerning diphtheria control applies with equal logic to all communities, but the writer proposes to consider the situation from the standpoint of a single community, namely, the City of New Orleans. The relation of "carriers" to the increase of diphtheria cases each year with the advent of school opening, when the child population is mobilized for school entrance, is clearly obvious. There are among them a certain number or percentage enrolling for the first time, representing those who are graduating from the "pre-school" to the school age, and who, among other things, come into crowded environments for the first time, and are placed under restraint of an unaccustomed discipline which tends to lower their general resistance. There is definite proof that of all children of the "pre-school" age, 90 per cent are susceptible to diphtheria. This knowledge has been made possible by the application of the Schick test. As to the prevalence of carriers, it must be noted that during the year 1932, though no well organized or sustained search was made, there were detected in one single public school of New Orleans (Lafayette) 182 diphtheria carriers; in 1934, still without a sustained search, there were discovered 801 carriers among public school children; and from January 1, to March 13, 1935, with a better organized move 1,144 diphtheria carriers have been found among the schools of this City. Under these circumstances and conditions it should cause no surprise to see diphtheria morbidity and mortality rates rise sharply each year with the opening of our schools.

The following tabulation of figures for the city of New Orleans shows the diphtheria incidence and its mortality as well as the annual births, which in turn indicate the constant pre-school population, and the average number of

children who apply for first enrollment in our schools annually:

1. Number of cases of diphtheria reported annually since 1928:

1935*	1934	1933	1932	1931	1930	1929	1928
265	662	404	643	615	560	554	509

2. Deaths credited to diphtheria annually since 1928:

1934	1933	1932	1931	1930	1929	1928
30	13	26	18	39	26	36

3. Number of births in city of New Orleans reported annually since 1928:

1934	1933	1932	1931	1930	1929	1928
8,821	8,532	9,154	9,207	9,339	9,383	10,123

\*January 1st to March 13th.

4. Number of diphtheria immunizations administered annually for as many years as this has been practiced by the City Health Department.

1934	1933	1932	1931	1930
2,292	1,997	11,453	1,620	470
1929	1928	1927	1926	1925
459	640	370	25	162

5. Number or percentage of diphtheria carriers detected in public schools thus far this session:

Tabulation is for total carriers: In homes, public schools, and parochial schools, and the total is for the entire calendar year.

1934	1935
801	1,144*

\*January 1st. to March 13th.

These figures clearly indicate that there is no semblance of an epidemic in our midst at the present time, and no one should become unduly excited in this direction. But, these same figures emphatically indicate two outstanding facts, namely: first, that the endemic or prevalent number of diphtheria cases in our midst is far higher than it is in other organized communities; and second, that there exists among our

school children an unbelievably large number of diphtheria carriers. Surely, these are more than potential factors for the starting of an epidemic; indeed, they represent actual hazards which should never be tolerated in any organized community. This is particularly true since we are in possession of a safe, reliable means of eliminating once and for all the danger of diphtheria outbreaks. It can be positively stated that experience has established toxoid immunization as the means to eradicate diphtheria effectively from any community without the hazard of any reactions or ill-effects of any consequence.

However, it is but fair that the public should be acquainted with detailed facts concerning immunity from every angle. All newborns are possessed of a certain degree of immunity against most contagious diseases; this is known as "natural immunity", and in the case of diphtheria "newborn infants seldom develop" the disease (Schlichter, Kirstein), in spite of the fact that during certain epidemics 85 per cent of them harbor the micro-organism and become carriers. This immunity or protection is due to the presence in the body tissues of certain specific anti-bodies which are capable of neutralizing the toxins and effects of the disease micro-organisms. These protective bodies are present in 84 per cent of newborn infants but gradually decrease so that at the end of the first year of life only 10 per cent of the infants are still possessed of enough anti-bodies to afford immunity against the disease, while 90 per cent of all children at this age (one year) lose this protection and become susceptible. It is noteworthy that breast-fed infants show the possession of this protective immunity in 13 per cent more cases than the artificially fed.

With the loss of this natural immunity susceptibility to the disease increases rapidly after the first month, reaching its highest level (90 per cent) at the age of one year, and remains high to the sixth year of life, when it begins to decrease slowly to the eighth year, at which time the decline becomes rapid, although at the age of puberty 20 per cent are still susceptible. When a child develops the disease and successfully overcomes it, the cure results from the development of sufficient anti-bodies to neutral-

ize the toxins of the micro-organism, or it is due to the direct introduction of anti-bodies in the form of anti-diphtheritic serum. Naturally, after convalescence is completed there still remain in the body of the patient a certain number of anti-bodies which act as an immunizing protection against further attacks. But, unfortunately this type of immunity (passive) is not permanent and lasts only for a limited time of variable duration. In this respect it must be understood that in administering anti-diphtheritic serum one introduces anti-bodies as such, which are ready to act at once as neutralizing agents against the disease.

When, however, immunity is provoked by the injection of toxoid, there is introduced into the patient a substance which per se is not capable of neutralizing the toxins of diphtheria, but acts by stimulating the body cells to develop or produce their own anti-bodies. This obviously requires a certain period of time, and, so it is, that immunity does not follow immediately after the toxoid injection, but requires a variable period of six weeks (54 per cent) to six months (98 per cent). The great advantage, however, is that this production of protective anti-bodies, once started under the impetus of toxoid stimulation continues indefinitely; cases are on record as maintaining such immunity for eleven years, and indications are that its effectiveness will last for life. Thus it is clearly obvious that a susceptible patient receiving toxoid might become infected and develop the disease during the period of immunity development, that is, within six months following the toxoid injection, but, will not do so after immunity is established, that is, six months after the toxoid injection.

Because of the increase in the number of diphtheria cases in the City of New Orleans during the year 1931 and especially during the last quarter of that year, an effort was made during the early months of 1932 to provide widespread immunization among our child population. It was hoped especially to reach those children who were to enter school for the first time at the following school opening, so as to provide them with effective immunity, which would offset their exposure to diphtheria carriers among school children. The remarkable



result was a drop of slightly over 30 per cent in the number of cases the following year (1933). Immunization, however, was not continued the following year, and the records of The City Board of Health show that there was during 1934 an increase of well over 30 per cent in the number of diphtheria cases reported. This is proof that immunization is definitely effective; it is proof, also, that the results can be made permanent only by a sustained campaign of immunization carried on from year to year. Many communities, notably New York, Chicago, Hamilton, Brantford and others have by active sustained campaigns of immunization practically banished diphtheria; surely their morbidity rates have been so markedly reduced as to represent practical eradication of the disease.

It is obvious that New Orleans in the past has not received proper attention in the matter of diphtheria immunization, and the public which justly expects health protection from its constituted health authorities, looks also to organized medicine for adequate protection against the hazards of epidemics. Organized medicine cheerfully adheres to its traditional position of leadership in these matters and offers its full weight and influence to the end that the present campaign of immunization under auspices of the Diphtheria Immunization Committee of New Orleans, will not only be carried forward until all children are immunized, but also to the end that immunization against diphtheria be made an annual program. In this way toxoid will be received annually and continuously by all children of the pre-school age, so that no susceptible child will be thrown in contact with diphtheria carriers when it applies for enrollment in our schools, with the consequent result that diphtheria will be completely eradicated from our midst.

The plans of the Committee on Diphtheria Immunization originally assumed as its objective the administration of toxoid to all children in families on the Emergency Relief Administration rolls of New Orleans, and the promoting of an educational campaign in the community that would result in all children of the city being immunized. It is hoped that physicians

will be consulted by their patients and receive proper explanation of the entire situation, and finally that the family physicians administer this essential protection to all children under their professional care. Physicians recognize that their first task in the discharge of their obligation to the public is the prevention of disease in the individual members of the population under their care, and that as guardians of their patients' health they are in reality guardians of the public health. Physicians recognize, too, that the highest degree of protection to the public health can be attained most economically by maintaining a watchful eye on the health of the child population. There are in the city of New Orleans between 55,000 and 60,000 children of pre-school age, and this number is practically maintained constant by virtue of the annual births which average roughly about 9000 per year.

It is obvious that these 60,000 pre-school children must be immunized before or soon after entering school, that is, before they are thrown into crowded contact with diphtheria carriers known to be present among our school children. Already the campaign has made some progress as indicated by records which show that over 6000 children on the various relief rolls have received toxoid since the beginning of this work; the committee hopes to administer toxoid to some 30,000 children of dependent families through its own facilities; the Charity Hospital Clinics, which have been administering toxoid immunization more regularly than any other agency; the City Board of Health and the Child Welfare Association. It is further expected that the remainder of our pre-school children, representing those financially able to do so, will be given this immunization by their private physicians.

The attack against diphtheria has gained momentum from each of the many local campaigns during the past several years. This year the movement has become nationwide in extent, and the annual "Child Health Day" programs on May first will have as a slogan "*Stamp Out Diphtheria*"; the measures proposed by the national "May Day Committee" are:



1. Immunize all children between the ages of six months and six years.
2. Make early immunization a routine practice by all physicians. Practically all pediatricians to immunize the children under their professional care during the first year of life, but this systematic routine should be followed also by all physicians in general practice who assume the responsibility of giving professional advice and care to children.

In closing the writer wishes to summarize his ideas as to how diphtheria can be eradicated from our midst by offering the following conclusions:

1. The highest point of susceptibility to diphtheria is developed between the sixth and twelfth months of life, and is maintained to the end of the fifth year. During this period 90 per cent of all children are susceptible to the disease and, therefore, Schick tests are superfluous.
2. Immunization before the sixth month is not necessary, while immunization in school children (after 6th year of life) is too late, since the highest incidence of susceptibility occurs from the second to sixth year of life.
3. All children should receive active immunization against diphtheria by toxoid injection during the pre-school period, and preferably before the end of the first year of life.
4. The effectiveness of this immunity should be tested by applying a Schick test six months or more after immunization.
5. No reactions whatever accompany or follow the administration of toxoid during the pre-school age, except in rare cases exhibiting decided allergic tendencies.
6. Reactions of minor consequences are met occasionally in older children, notably about the age of puberty.
7. Toxoid immunization is of no value in combatting an active epidemic because the development of immunity requires six months to become fully established.
8. Diphtheria can positively be eradicated

from any community by a sustained plan of immunizing annually all pre-school children.

9. Diphtheria immunization should be made a requirement for school entrance, and should be recorded by negative Schick test certificates.

#### REFERENCES

1. Pfaundler and Schlossmann, *The Diseases of Children*, 4th. ed. Volumes I-III.
2. Annual Reports, Department of Health, New York City, 1932.
3. Baudensen, Herman, N. M. D. Diphtheria Prevention in Chicago, *Am. Jr. Public Health*, May, 1934.
4. Bulletin New Haven Department of Health, January, 1935.
5. Robin, Wm. H., M. D. Supt. of Health, New Orleans: Personal Communication.
6. Strong, R. A., M. D., *The Newer Conception of Diphtheria Immunization*, New Orleans Med. and Surg. Jour., April, 1932.
7. Talbot, P. T., M. D., Secty. Louisiana State Med. Society: Personal Communication.
8. Signorelli, John, M. D., *The Economic Phase of Diphtheria Immunization in New Orleans*, New Orleans Med. and Surg. Jour., April, 1932.
9. Signorelli, John, M. D., *Preparing the Child's Health for School*, Jour. La. Teachers Ass'n., January, 1932.

#### DISCUSSION

Dr. R. A. Strong (New Orleans): As Dr. Signorelli has told you, fifty years have elapsed since von Behring discovered the serum which stands as the most perfect specific among all serotherapeutic agents. We had been waiting for the development of a means by which diphtheria could be prevented. During the past fifty years this substance has been greatly improved, and in the light of our present knowledge it may be said that the following conclusions are very definitely established:

That all children, excepting those with decided allergic tendencies, should be given the benefit of active immunization against diphtheria during the pre-school age without a preliminary Schick test. The best means of accomplishing this is by the administration of not less than two, nor more than three, 1 c. c. doses of diphtheria toxoid. The great susceptibility of the pre-school child eliminates the Schick test, but it is desirable to perform the preliminary Schick test on older children, especially in urban communities.

Toxoid has replaced toxin antitoxin as an immunizing agent. Toxoid is from 20 per cent to 30 per cent more effective even in only two doses. It contains no serum to sensitize to later therapeutic sera if such a sera has to be given. It contains no free toxin and is more stable.

There can be no question that many of the difficulties which occur in the developmental period of every new departure have been overcome. While the whole procedure of active immunization against diphtheria has been greatly simplified, it still is necessary to use a certain amount of discrimination. I, therefore, heartily agree with Dr. Signorelli in the statement that the application of the methods should remain in the hands of organized medicine. Moreover, it behooves every physician to put forth every effort to inform himself concerning the latest methods of active immunization of the child against diphtheria. Moreover, if every child was actively immunized in the pre-school period, almost complete eradication of diphtheria would be assured.

We should not discuss diphtheria without pausing to pay tribute to the names of von Behring, Theobald Smith, Schick, William H. Park, Glenny, Allen and Hopkins who brought this means to its present state of perfection. The benefit to little children cannot be estimated. It is one of the most important victories of man against death. It will endure for all time as one of the specifics of disease and prevention with a specific immunizing antigen.

Dr. C. L. Chassaingnac (New Orleans): The hour is late, so after congratulating Dr. Signorelli on his paper and stating that naturally I am in full accord with his conclusions and those of Dr. Strong, I will merely add for the sake of keeping the record straight that there have been immunized through the local health authorities, the City Board of Health, 15,000 pre-school children and school children within the last three or four months, that is since the beginning of the year. That in addition to that, many of the immunizations that have been made through the various clinics, have been done with the toxoid furnished by our City Board of Health. So that while I agree entirely with the statement that the movement should be in the hands of organized medicine, I do not believe that all credit should be forgotten to be given to our local health authorities and of course welcome the cooperation of other welfare societies, and especially the medical profession.

Dr. Geo. F. Fasting (New Orleans): Excuse me for speaking a second time tonight, but this being a medical meeting in which certain honored methods should have a hearing, it is well to bring up the methods not understood so well. I will digress a little from the paper to speak of the problem that involves the carrier. Most people do not understand where the diphtheria infection comes from. It is a question in my mind as to how many medical men understand the carrier problem and appreciate the difficulties associated with it. It is only a matter of a few years when the carrier problem for diphtheria, as well as for typhoid, will come up for this State body to act upon; because the question of isolating carriers involves the infringement of certain "liberties" of the people, and our present laws are not adequate to meet such infringement.

We admit the existence of carriers, but find it difficult to establish all such cases in a community. Carriers develop following acute diphtheria, but what to do for them challenges our medical knowledge and legal rights.

It has been found in many cases that tonsillectomy will clear up such cases, and where possible we should induce parents to consent to tonsillectomy. Research is necessary to find the means of eradicating the carrier state. In the meantime we may concentrate on isolation of the cases. The most we can do from the legal standpoint is to prevent the carrier from dealing with food, and thru such channel pass the infection to others. This is illustrated by a diphtheria epidemic in 1917, at Newport, R. I., where the infection was transmitted through ice cream.

The public should be told of the dangers in the acute, subacute and carriers of diphtheria, and by education we may reach a point where the public, as well as the individual, will tolerate isolation and not consider it infringement of liberty. A related problem is the obligation of the state in dealing with carriers in a community. Funds will have to be provided for this care, as is being done in some states for typhoid carriers. We may see the day when the state finds it advantageous to isolate and provide for carriers of certain diseases.

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## THE 1935 MEETING OF THE AMERICAN MEDICAL ASSOCIATION

There was held in Atlantic City the first part of last month one of the most stimulating medical meetings ever held in this country. In the first place the meeting was notable for the fact that it was a combined assembly of the two great medical societies of the continent of North America, the American and the Cana-

dian Medical Associations. It is quite possible, though not definitely decided, that four years from now the two associations will again combine at some meeting place in Canada. As a result of this getting together more than 8,000 registered from the United States and Canada. There were representatives from every section of these United States, and the South was indeed well represented. From the State of Louisiana came 30 representative doctors to observe and to learn.

At the association meeting a physician can hear about almost any medical disorder in the lists of disease conditions. Be he a specialist or be he a general practitioner, there is offered to him such a large and comprehensive program that opportunities are afforded of hearing papers on subjects which may be of particular interest or which may have a general appeal to the listener. In addition to the opportunity of hearing papers, the visitor to one of these conventions has the chance of seeing an unrivaled scientific exhibit. There at his leisure the physician can see represented graphically or actually the results of certain lines of treatment, the effects of certain morbid changes in the body, the experiments in the production of disease conditions; in fact there is enough present in the scientific exhibit to keep the physician busy every day that the convention meets.

Nor must there be forgotten a really splendid commercial exhibit where the physician has the chance of learning about the new drugs, new instruments, and looking over new books. While the commercial exhibit frankly is an appeal to the physician's pocket book, nevertheless it gives him the opportunity of seeing the newer things in medicine which are for sale and which probably he would like to purchase only after he has had the opportunity of looking over these things.

Next year the American Medical Association will meet in Kansas City at a date not as yet determined. This meeting place will be more central than Atlantic City, and it will be comparatively easy for the doctors of Louisiana and Mississippi to get to this next year's convention. Earnestly we suggest that when the date of the meeting is announced that the

physician puts down on his calendar this date, and if possible make the trip to Kansas City the first consideration for the coming year. It will more than repay the time and money that is spent in the opportunity of learning, and also of seeing one's old friends and classmates who perchance have not been seen for some years.

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## THE FIGHT AGAINST TUBERCULOSIS

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In spite of the fact that the mortality rate in tuberculosis has diminished to such an extent that one case is observed nowadays where four were seen 35 years ago, nevertheless the struggle to control this disease must still be maintained by the unabated efforts of physician and socially inclined lay individuals who are ancillaries to the medical profession. It is only by continuous and unrelenting activities that further progress will be made in the reduction of mortality and morbidity rate of this disturbing disease. In pursuance of the plan to maintain continuously the fight against the disease the Tuberculosis and Public Health Association of Louisiana has sent out to the medical profession of the state some important pamphlets which well merit study by the practitioner of medicine. In that one entitled "Diagnostic Standards" the symptoms are presented briefly it is true, but thoroughly; the disease is classified according to the modern concept and there are discussed tuberculin testing and the use of the x-ray, as well as several other important features that have to do with the study of tuberculous patient. With these data at his fingertips the doctor will be more able to cope with the tuberculosis situation in general and more specifically in individual cases.

It must not be forgotten that an extremely important feature of the control of tuberculosis is the education of the patient. To paraphrase Dr. Boswell, modern sanatoria are in truth nothing more than educational institutions where the patient is taught how to take care of himself and how to avoid spreading contagion. All patients cannot go to sanatoria, however, and the Association is prepared to help the physician by sending to patients, or others who are coming in contact with tuber-

culous people, educational pamphlets which will acquaint the patient with what he must do and should do. The printed word saves the time of the physician who otherwise would have to spend hours in detailed recital of what the patient must do, and, furthermore, often that which appears in print has a certain weight of authority which the spoken word lacks. The doctors of this state are encouraged to make use of the aid that the State Tuberculosis and Public Health Association can offer them. Call upon them if you need the type of help that they can give you. Do not disregard the material that has recently been mailed to you. Do not mistake it for advertising material; look it over carefully, it will well repay you.

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## A NEW TREATMENT OF MENINGITIS

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The recent introduction to the medical profession of meningococcic anti-toxin in the treatment of meningitis due to a specific meningococcus represents what appears to be an advance in the therapy of this frequently lethal condition. The present method of administering specific anti-serum into the spinal canal and the giving of this anti-serum early in the diagnosis by the intravenous route has proved satisfactory only in a limited number of cases. The mortality rate in meningitis, while materially altered since Flexner's epoch-making work, nevertheless remains higher than it should be when it is taken into consideration that a tremendous amount of knowledge has been obtained by investigators and clinicians concerning the meningococcus and its many expressions.

Ferry, several years ago, showed that of the several types of meningococcus extra-cellular toxins were specific to the four types as well as toxin which seemed to be common to all of the groups. If animals were injected with toxins, an anti-toxin was elaborated which, in turn, would neutralize the toxin. He later showed that this anti-toxin could protect guinea pigs and also that a goodly part of the symptoms of meningitis depend upon the action on the central nervous system of a specific toxin which, in turn, could be neutralized satisfactorily by the anti-toxin.



These experiments of Ferry's have led to the introduction of a meningococcic anti-toxin which has been tried out reasonably extensively before being introduced commercially. It still remains, however, for a considerable series of cases to be compared with an equal number of cases that are not treated with this anti-toxin to determine as to its relative merits in comparison with the treatment by anti-meningococcus serum. H. S. Banks,\* one of the physicians who has followed out such plan of procedure, reports on a small group of such cases. He treated 12 patients with the anti-toxin and 9 with the serum. An attempt was made to control the cases so that they would fall in approximately the same age group, the same day of the disease and would represent the same clinical type. The plan of treatment provided for the intravenous and lumbar administration of the anti-toxin, giving 15 c. c. intraspinally and 30 c. c. intravenously on the day of admission, two such on the following day and one on the third day. The results apparently were more satisfactory with the anti-toxin than with the serum. Nine

patients recovered to whom were given the anti-toxin and 4 recovered who were given the serum. In the light of his experience Banks believed that anti-toxin definitely is a potent therapeutic agent for types I and III meningococcic meningitis but is doubtful of its potency in type II. He furthermore feels that the dosage is inadequate and that twice daily spinal injections should be given in the early stages of the disease with one or several intravenous injections, increasing the amount of anti-toxin correspondingly to 400 to 500 c. c.

In the Charity Hospital the anti-toxin has been used in a few cases. Experience there has been entirely too brief and the cases too few to draw any conclusions. It might be said, however, that there does seem to be immediately after the injections intravenously a slight improvement in the toxic symptoms that the patient presents.

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\*Banks, H. S., A Note on Ferry's Meningococcus Antitoxin in the Treatment of Acute Cerebrospinal Fever. *Lancet*, 228:856, April 13, 1935.

## HOSPITAL STAFF TRANSACTIONS

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### FRENCH HOSPITAL STAFF MEETING

A regular meeting of the French Hospital Staff was called to order Friday May 10, 1935 at 8:00 P. M. by Dr. H. F. Ader.

Dr. E. L. Zander presented a very interesting paper on "Pre-Natal Care." The paper consisted of suggestions arrived at during his experience with pregnancy. The most important treatment is a complete and thorough examination of the patient on first visit to physician. X-rays are very desirable. Dr. Graffagnino stated that he is very much in favor of Dr. Zander's methods of treating the expectant mother. Also, that it is very unfortunate that every mother is not in position to benefit by all the modern methods. Dr. Devron's discussion also favored Dr. Zander's methods. Dr. Howles approved very much of the venereal disease examination.

From a urologist's standpoint, Dr. Gordon differed in opinion about the urinalysis. He stated that catheterization is not always practical. Dr. Baron also discussed the paper. In closing his paper, Dr. Zander explained to all who discussed the paper, that he was suggesting the most practical methods he has found.

In the absence of Dr. Henderson, Dr. Geraci

discussed the death of Master M. He previously had pneumonia, but at the time of admission nothing could be detected in the lungs.

Dr. Jung discussed the death of Baby D., delivered a still born, which was due to a fall received by the mother.

Dr. Geraci, also, discussed the case of the still-born Baby F., born a fully normal baby.

Dr. Graffagnino next discussed the death of Mrs. LaP., who was in her 5th month of pregnancy. In about two weeks her blood pressure jumped to 200. She was admitted on April 5, and expired April 6, 1935. The treatment for eclampsia suggested by Dr. Graffagnino; keeping the blood pressure normal, will eliminate toxemias, also helps to control convulsive seizures. Most cases have responded favorably to this treatment.

Dr. Longo stated that toxemias of pregnancy cause cerebral edema. He suggested intravenous methods. Dr. Stadiem finds that the spinal treatment is not as effective as glucose.

Dr. Gordon discussed the death of his patient Mr. M. The prostate was enlarged to about the size of the doubled fist. At the time of admission the blood pressure was 240/120. The night of the



dust storm he contracted pneumonia with 24 hours the definite terminal. He had no fever.

N. J. Tessitore, M. D.  
Secretary

#### VICKSBURG SANITARIUM STAFF MEETING

The regular monthly meeting of the staff of the Vicksburg Sanitarium was held on Monday, June 10, with thirteen members of the staff and four guests present. After a supper, served at 6:30 p. m., and the business of the staff, Dr. F. Michael Smith, Director, Warren County Health Department, presented a report of vital statistics for the year of 1934.

Special Case Reports were presented as follows:

1. Abscess of Kidney—Nephrectomy.—Dr. A. Street.
2. Acute Intestinal Obstruction.—Dr. J. A. K. Birchett, Jr.
3. Coronary Occlusion: A Typical Case.—Dr. L. J. Clark.

Special reports were made as follows:

The Recent Meeting of the Louisiana State Medical Association.—Dr. L. J. Clark.

The Recent Meeting of the Mississippi State Medical Association.—Dr. A. Street.

The Recent Meeting of the Mississippi State Hospital Association.—Dr. A. Street and Dr. L. S. Lippincott.

Selected radiographic studies were demonstrated as follows:

Fracture of hip treated with well leg splint; sarcoma of femur; osteomyelitis of pubic bone; skull in intracranial pressure; mastoiditis; pneumonia and complication of suppurative pleurisy and lung abscess (Six cases.)

Three minute reports of the literature of the month were given as follows:

Dr. L. S. Lippincott.—Modern Attitude Towards Traumatic Cancer.

Dr. J. A. K. Birchett, Jr.—Hyperparathyroidism.

Dr. L. J. Clark.—The Fourth Lead in Electrocardiography.

Dr. R. A. Street, Jr.—Traumatic Neuritis During and After Labor.

Dr. H. H. Johnson.—Infections of the Neck.

Dr. W. E. Johnston.—Allantoin in the Treatment of Wounds.

The next meeting of the staff will be held Wednesday, July 10, at 6:30 P. M.

Leon S. Lippincott,  
Secretary

began night before admission; came on following ingestion of large meal of fried oysters with nausea and vomiting. It was general over abdomen and three hypodermics of morphine were required to give relief. Had had normal bowel movement evening of the attack and had had no previous trouble with bowels. When first seen by me approximately 48 hours after onset there was still complaint of generalized abdominal pain and there was evidence of abdominal rigidity. She had a soda enema two hours before with no results except passage of slight amount of gas. There was still nausea but there had been no vomiting since morning. A diagnosis of probable intestinal obstruction was made although there was no evidence of distended loops of bowel or visible peristalsis. There was a tinkling sound on auscultation with stethoscope over the lower iliac regions of the abdomen which is commensurate with the findings in the presence of a dynamic ileus.

Physical Examination.—Large, fairly well nourished woman of middle age. Abdomen distended; midline scar of old operation (total hysterectomy had been performed several years before). Blood count was commensurate with acute peritoneal inflammation, leukocytes 20,900; lymphocytes 18 per cent, monocytes 1.5 per cent, neutrophils, mature 28 per cent, immature 52.5 per cent. Urine showed many hyaline casts. Radiographic of abdomen showed many fluid levels of dynamic ileus.

Procedure.—With diagnosis of acute obstruction laparotomy was done. Incision to right of previous operative scar was made. Peritoneum was filled with a sero-sanguinous exudate. Collapsed ileum was identified and followed into the pelvis where obstruction was located in form of a volvulus. A portion of the upper ileum had become twisted and caught behind the shelf of the bladder. There were few adhesions except where the twisted bowel crossed itself and these were of recent origin. The loop was carefully lifted from the pelvis, fearing rupture because of its friable gangrenous nature. There was marked thrombosis of the mesenteric vessels immediately opposite the twisted area. The amount of bowel involved was approximately 24 inches. Resection was the procedure of choice but the condition of patient and the extensive thrombosis present did not permit this procedure. Therefore, the loop (gangrenous) was exteriorized and the abdomen loosely closed about the mass, placing one cigarette drain alongside the mesentery and placing enterostomy in the viable portion of the proximal loop using a number 20 catheter to permit passage of gas and liquid fecal material and assist in detoxifying the patient. Glucose was administered twice daily and for four days after operation beginning on third postoperative day 20 c.c. of 20 per cent salt solution was given to stimulate peristaltic action and empty

Abstract.—Acute Intestinal Obstruction.—Dr. J. A. K. Birchett, Jr.

Patient.—White, female, age 45, admitted to Sanitarium by ambulance, March 31, 1935.

Chief Complaint.—Acute pain in abdomen. Pain

bowels through enterostomy tube. There was no evidence of peritoneal infection: temperature went as high as 101°F. on third day with no increase in pulse.

On the seventh postoperative day the gangrenous loop of ileum was removed leaving a double barreled type of enterostomy—with proximal end functioning well. The abdominal wall was in good condition, there being no abscess present. The peritoneum was apparently well healed about the mesentery. As this was a very high enterostomy there was fear of possible alkalosis and starvation due to passage of high bowel content and metabolic factors. Patient's condition was not thought to be improving so a transfusion was done on April 4, 500 c. c. of citrated blood being given. There was evidence of improvement and on April 9, the ends of the exteriorized ileum were freed from the wound and an enteroenterostomy was done by end to end method. However, the bowel wall was leather like and tough and did not fold in as normal bowel does because of the thickening caused by inflammatory reaction. Fearful of leakage of suture line and to safeguard the intestinal continuity the small bowel was short circuited just below the anastomosis, using a Murphy button. Drains were placed to anastomosis loop which was replaced in abdomen. The procedure was well borne but the fears of leakage were realized for on the fourth postoperative day lower end of wound where drains were placed began to drain fecal material. Drainage was profuse for ten days when it began to lessen and patient was permitted to return home as she was beginning to have small bowel movements normally and the abdominal fistula was getting smaller.

This patient had several minor complications while in hospital, complaining with recurrent attacks of mild cystitis which responded to bladder lavage. She suffered intensively with hemorrhoids which had been given her trouble for sometime. The repeated irrigations and enemas to lower bowel aggravated this condition.

Her general condition is good at this time, she is gaining weight, digestion is good, she has normal bowel movements and the abdominal sinus has closed. Last week I had her come back to the Sanitarium and removed her hemorrhoids under local anesthesia by cauterization and she is feeling very well again and started back to her routine house keeping.

#### MERCY HOSPITAL

The regular monthly meeting of the Mercy Hospital Staff was held Wednesday, June 5, Dr. J. E. Briere presiding. The paper on the program was amebiasis presented by Dr. J. L. Locascio.

#### AMEBIASIS

By the clinical term "amebiasis" is meant the invasion of the tissues of man by the pathogenic ameba, *Endamoeba histolytica*. This invasion occurs primarily through the mucous membrane of the large intestine or, much more rarely, through that of the lower portion of the ileum, and symptoms of the infection vary all the way from slight digestive disturbances to the most severe symptoms of amebic dysentery or amebic abscess of the liver or other organs. By the term "amebic dysentery" is understood a bloody, mucoid diarrhea caused by *Endamoeba histolytica* and occurring as one of the manifestations of amebiasis.

In the past the terms "amebiasis" and "amebic dysentery" have been used very loosely to indicate the same clinical picture and even today the vast majority of the medical profession regard amebic dysentery as the only manifestation of infection with *Endamoeba histolytica* and in some of our most recent text books upon medicine the entire subject of amebiasis is considered under the heading of "amebic dysentery". Such a conception of amebiasis is erroneous and has lead to the belief by the profession that amebic infection is practically confined to tropical regions because one manifestation of amebiasis, i.e. amebic dysentery, is more frequently encountered in the tropics than in temperate regions.

It is most unfortunate that the term amebic dysentery should have become, in the minds of most medical men, a synonym of amebiasis, or amebic infection; for while dysenteric symptoms are quite characteristic of the serious infections with *Endamoeba histolytica*, the vast majority of such infections are not accompanied by dysenteric symptoms but by much milder symptoms usually attributed to some other factor and not recognized as the result of infection with this parasite.

The recognition of the fact that amebic dysentery is a part only of the picture of amebiasis is essential to any intelligent understanding of infection with *Endamoeba histolytica*, or amebiasis. Until this fact is recognized by the medical profession we can hope for but little advance in efforts at prophylaxis or treatment, and amebiasis will continue to be regarded as a tropical infection whereas it has a world-wide distribution and is prevalent throughout the United States. It has been conservatively estimated that from 5 to 10 per cent of the population of this country is infected with *Endamoeba histolytica* and it is the belief that 50 per cent of individuals infected with this parasite have definite symptoms which are caused by its presence.

While amebiasis has a world-wide distribution the severe lesions and symptoms which are present in amebic dysentery occur much more frequently in the tropics and the warmer portions of

the sub-tropics than in temperate and cold climates. Amebic dysentery has long been known to be very prevalent in certain tropical countries and for this reason it has usually been considered as a tropical disease, but no conception can be further from the truth, for amebic dysentery does occur in temperate regions and much more frequently than is generally believed.

*Etiology.*—While five different species of endameba are known to inhabit man's intestinal tract, the *Endamoeba histolytica* is the pathogenic one. This species of ameba has three stages in its life cycle, the vegetative, orthophozoite, stage; the precystic stage; and the cystic stage, and in each of these stages it varies in morphology.

*Pathology.*—*E. histolytica* secretes a substance which dissolves intestinal epithelial cells and red blood cells. The parasite injures the surface layer of the mucosa by cytolysis, which is then followed by mechanical penetration by the amebae of the underlying tissue, this being again followed by cytolysis and further penetration. Secondary bacterial infection occurs unless the superficial lesion produced by cytolysis rapidly heals, and a mixed infection results, the lesions then becoming the joint product of the amebic and bacterial infection. Just how much of the pathologic picture of amebic dysentery and amebiasis is due to the ameba alone or to mixed infection with various bacteria is problematical, but it is a fact that, even if secondary bacterial occurs, the resultant pathological picture is absolutely characteristic and is thus well recognized as the picture of amebic ulceration of the intestine, or of amebic abscess of certain organs or tissues. The most confusing pathologic picture is that of a combined amebic and bacillary dysentery but a careful study of such cases will demonstrate the characteristic pathology of both infections in certain regions of the intestine.

*Pathology in Carriers.*—It has already been noted that a large proportion of individuals infected with *E. histolytica* either present no symptoms of the infection or the symptoms are those of gastro-intestinal irritation and mild diarrheal attacks, rather than those of amebic dysentery. In the carriers without symptoms it is probable that most of the lesions are quickly healed although there is an abundance of evidence to prove that marked lesions may be present in the intestine of symptomless carriers of this parasite. Numerous autopsy records upon carriers of this parasite have been published from time to time. These records demonstrate that not only may extensive superficial necrosis of the mucous membrane of the large intestine be present but that definite ulceration, involving even the muscular coats of the intestine, may be present in individuals who never suffered from diarrhea or dysentery, while amebic abscess of the liver has frequently been described as occurring in such individuals.

*Location of Lesions.*—The lesions of amebic dysentery are most commonly observed in the rectum and just below the ileo-cecal valve. In mild infections the lesion may be confined to one of these regions, while in the more severe infections the entire intestine may be invaded. Lesions are most frequently found in the cecum, ascending colon, sigmoid and rectum.

*Symptomatology in Carriers.*—This parasite always invades the tissues of the host. The symptoms may be so slight that the patient may not notice them. All carrier symptoms are confined to gastro-intestinal tract, the circulatory and nervous systems.

Constipation, evanescent attacks of diarrhea, colicky pains in lower abdomen or the right iliac region, anorexia or a capricious appetite, gaseous distention of the abdomen, after eating gaseous eructations, and slight nausea before eating or directly after.

Neuralgic pains in lower abdomen, back of legs, dull frontal headache, sleepiness or disturbed slumber, poor memory, lack of ambition, dull aching in muscles of legs, especially in the morning, and a constant evanescent aching in the lumbar region.

Irritable pulse, tachycardia, arrhythmias, vasomotor disturbances, flushing of skin, excess perspiration of hands and feet.

*Examination.*—Sallow skin, slight anaemia, irritable pulse, tenderness on deep pressure over localized areas of large bowel, right iliac fossa, distention of abdomen, some cases tenderness over liver.

The symptoms of amebic diarrhea or enteritis are those already described as occurring in carriers with the addition of recurring attacks of diarrhea lasting for several days or weeks. Other symptoms are more pronounced; the bowel movements do not exceed 3 to 5 in the 24 hours usually. Between the attacks of diarrhea the patients are usually constipated. The onset of amebic dysentery may be sudden or it may occur during an attack of diarrhea, the symptoms differ markedly in different individuals, in some assuming a fulminant character followed by death in a comparatively short time, while in others they may be very mild and rapid spontaneous recovery may occur. When the onset is sudden, the patient is acutely seized with severe abdominal pain, accompanied by nausea or vomiting, there is an intense desire to defecate, the stools are formed or semi-formed at first then rapidly become fluid. Blood stained mucus and necrotic shreds of the mucous membrane are passed with considerable tenesmus. Bowel movements vary from 6-8 in mild cases to 30-40 in the most severe infections, the average number being from 15-20 in 24 hours. Emaciation is rapid, with temperature of 100° to 104°, severe toxemia. It is believed that these so-



called amebic dysenteries are really mixed infections with one of the dysentery bacilli. Fortunately they are rare.

Duration of chronic amebic dysentery is very variable, and while the condition is not self limited, spontaneous recovery may occur at any time, or some complicating condition, as amebic abscess of the liver, may result in death. Without treatment the condition may disappear permanently or for long periods of time no dysenteric symptoms may occur. With proper treatment a cure may be obtained within a short time in cases which have not been of too long standing. We seldom see at the present time the long continued cases of chronic amebic dysentery that used to be observed so frequently. The modern treatment of amebic dysentery and amebiasis has resulted in great improvement in the recovery rate of all forms of amebiasis. Death in chronic amebic dysentery is usually due to either exhaustion; a complication, as abscess of the liver; or to some other infection, as broncho or lobar pneumonia.

The prophylaxis of infection with *Endamoeba histolytica* depends entirely upon the prevention of the contamination of food and drink with the cysts of the parasite. A properly guarded and impounded water supply; the proper disposal of sewage; the protection of food from flies; and most important of all, the examination of food handlers in public eating places. In regions where there is no filtered water supply, and the water is gotten from wells, springs, and other similar sources, it is well to remember that such water can be rendered safe only by boiling, as no chemical has been found that will kill the cyst of *Endamoeba histolytica* in amounts which may be safely added to the water.

*Treatment.*—There are several drugs that are practically specific in the treatment of infection with *Endamoeba histolytica*, both in carriers and in those suffering from symptoms of the infection, including amebic dysentery.

Carbosone: Introduced as a specific (28.85 per cent Arsenic) less toxic than acetarsone: dose 4 grs. twice a day for ten days, repeat in resistant cases in ten days; retention enema 200 c.c. 2 per cent soda bicarb, 1 per cent carbosone, daily for 5 days.

Chiniofon: (yatren-anayodin) 4 grs. pills (28 per cent of iodine) 4 t. i. d.

Treparsol: arsenobenzolic derivative; 4 grs. t. i. d. with meals for 10 days, rest 10 days then t. i. d. for 4 days.

Acetarsone: (stovarsol) 27 per cent arsenic in tablet form, 4 grs. t. i. d.

Emetine-bismuth-iodide: 29 per cent emetine, 12 per cent bismuth, 58 per cent iodine; 3 grs. once daily for 12 consecutive days.

Emetine:  $\frac{1}{2}$  gr.-1 gr. subcutaneously or intramuscularly, daily.

Treatment of carriers with and without symptoms: Chinioform being non toxic is the most valuable drug. It usually causes a diarrhea at the beginning. Avoid rich foods, or foods which may cause gaseous eructations or distention, or have been found to disagree with the individual. One course of 8 to 10 days. Sometimes a second course may be necessary to rid of *E. histol.* Stools should be examined at least three times at intervals of a week, and at least once a month thereafter for three months. If diarrhea severe put to bed; use 2 pills of chinioform to start with; fluid or semifluid diet.

Acute dysentery: Emetine is employed only to control the acute dysentery symptoms, 1 gr. daily for 8-10 days.

For the treatment of carriers, either with or without symptoms, emetine should never be used, as this drug cures a very small percentage of infections. As stated it should never be used except to control symptoms of dysentery then the dose should never exceed 1 gr. daily for at most 12 days.

It is good treatment in amebic dysentery to administer emetine hydrochloride to control the acute symptoms and then to give a course of one of the other drugs which have been mentioned.

#### THE OSCAR ALLEN TUMOR CLINIC CHARITY HOSPITAL NEW ORLEANS

The scientific meeting of June was called by Doctor J. T. Nix, Director. The essayist was Miss Louise Meyer, M. A., who presented the following paper.

#### SOCIAL PROBLEMS IN THE TUMOR CLINIC, CHARITY HOSPITAL

In the social treatment of cases of malignancy in the Tumor Clinic, Charity Hospital, three problems are met with most frequently: one problem is the economic adjustment necessary when the patient is the wage earner; a second is the difficulty encountered in persuading a patient with personality maladjustment to receive treatment; and the third involves arranging for colored patients to receive courses of deep x-ray therapy.

In considering the first problem, it is found that if treatment can be instituted early, the patient can usually continue working. As most cases of malignancy, however, are advanced when treatment is sought, it is often impossible for the patient to resume work. In these latter cases, either some other member of the family must assume the responsibility, or failing this, the case must be referred to an agency for relief. In New Orleans at present the relief set-up includes the Emergency Relief Administration and the Department of Public Welfare. The Emergency Relief Administration certifies for work relief only those who are physically able to work but unable to find employment,



while the Department of Public Welfare accepts only unemployables, those physically unable to work. When the patient is unable to resume work, if there is no one in the family group old enough or able to work, the case is referred to the Department of Public Welfare. If some member of the family can be certified for work, the case is referred to the Emergency Relief Administration. Throughout the state the same set-up prevails; however, the agency for unemployables is known as the Parish Welfare Organization. Residency in the parish is required by both agencies in all parishes.

A discussion of several cases may serve to illustrate this problem. Philman J. was an active 84 year old negro, living in White Castle, Louisiana, who supported himself and his wife by fishing and crabbing until a malignant lesion of the tongue made it impossible for him to continue working. When the patient reported to the Tumor Clinic in October, 1934, the only treatment which could be given was deep x-ray therapy. The first course was interrupted before completion because Philman was afraid to leave his wife, who was senile, alone any longer. On account of lack of finances, weekly trips to and from the hospital for deep x-ray therapy could not be made. There were no relatives or friends in White Castle to help financially or to care for his wife during the patient's absences. Relatives in New Orleans consisted of a son, receiving relief from the Emergency Relief Administration, and a grand-daughter-in-law with pulmonary tuberculosis. As there were no resources within the family group, the case was referred to the Parish Welfare Organization with the request that some plan be made for his wife's care while treatment was being received. The agency has accepted the case for relief. The wife is staying temporarily with neighbors and the patient is in New Orleans receiving treatment.

Another case was that of a 49-year-old white woman, Mrs. Mary P., who had a malignant mass involving the entire left maxillary bone. Biopsy of the lesion showed squamous cell carcinoma, grade 2-3. As the patient's condition failed to respond to radium and deep x-ray therapy, radical surgery was advised. In view of general debility and the extensiveness of the growth, it was doubtful that employment could ever be resumed. Mrs. P., a widow for 17 years, had supported her two children during that interval by working as telephone operator on the night shift at the Illinois Central Railroad. Income was \$60.00 a month and besides supporting her own family and carrying small endowment policies on both children, the patient had contributed toward the support of her late brother's two children. During the past year, as Mrs. P. was unable to work and as her son, who had lost a recently secured job through repeated careless errors, was not able to find other work, the family

was dependent on the \$40.00 a month pension received by Mrs. P.'s father. This pension was from the New Orleans Public Service Company and was granted at the age of 72 after a work record of sixty years. As the family of five adults, consisting of the patient, her daughter, 17, her son, 21, her father, 78, and her step-mother, 70, could not live on even a minimum budget of \$40.00 a month, the case was referred to the Emergency Relief Administration. The patient's son was certified for work relief and he was to assume the support of his mother and sister.

A third case illustrating the economic aspect was that of Mr. Herman G. Mr. G. was white, 70 years old, a native of Holland, who had lived in Louisiana for forty years. When an extensive carcinomatous growth of the right auricular region made further employment on a McWilliams Company dredge impossible, the patient was sent to Charity Hospital for treatment. As involvement was so extensive, treatment was not considered advisable. St. Martin parish, in which Mr. G. had resided for eighteen years, did not wish the patient back because he was now unemployable. Mr. G. had no relatives and no friends. He could not live alone and no one in St. Martin parish would consider boarding home care. Diagnosis and also the fact that Mr. G. was not a resident of Orleans Parish made him ineligible for care in any institution in New Orleans and non-residency kept any agency in New Orleans from accepting the case for relief. St. Martin parish was finally forced to assume responsibility for Mr. G. and boarding care in New Orleans was financed.

The second problem, that of persuading patients with behavior difficulties to receive treatment, is serious because it often means that the prognosis is changed due to delay in receiving treatment. Undoubtedly, all patients, regardless of diagnosis, very often present personality difficulties to some degree but, from a personal viewpoint, it seems that these difficulties are more marked in patients with malignancy.

A case illustrating this point is that of a 69-year-old white man, Mr. William E., with basal cell carcinoma, grade No. 1, of the face. Admission to hospital for surgery was advised and the patient agreed willingly to this plan. On the day following admission, excision of the growth and cauterization were performed. Shortly after the operation, however, the patient deserted because he thought he was not getting the proper care. In spite of the fact that a special diet was being given, Mr. E. stated that he was starving. His wife, who stayed on the ward all day, berated the nurses because the wound was dressed daily while she thought it should be dressed twice a day. Upon deserting, Mr. E. announced that he would return for further treatment as soon as he regained his strength. A child welfare nurse was sent in to dress the area

but as she could not visit daily, it was suggested that Mrs. E. learn to do the dressing. Mrs. E., however, demurred because the wound was unsightly. It was not until four months after desertion that the patient finally agreed to return to the hospital. During this hospitalization two stages of a plastic operation were performed. Soon after the second stage was done, the patient deserted. He left the ward this time because both he and his family thought that the doctors were not taking enough interest in his case, and because adhesive tape was used to secure the dressing instead of a gauze bandage which Mr. E. preferred. The patient would not consider returning to the ward unless it was definitely understood that he could be given temporary leaves of absence over the week-end whenever he wished, and that the doctor would express intense interest in his condition both verbally and by eliminating the tape dressing. Without constant cajolery, Mr. E. would not complete even the first stage of treatment. Even with constant attention and acceptance, whenever possible, of his whims, he could not be persuaded to remain in the hospital until completion of treatment. In this, he was aided and abetted by his family, which consisted of his wife and daughter. The wife and daughter telephoned the doctor nightly to complain that treatment was progressing so slowly and to suggest various other forms of treatment. The family was supported by the daughter who was a substitute legal stenographer, earning \$72.00 a month. Mr. E. had been an engraver averaging \$80.00 a week before the depression; a strike, and present illness terminated his employment. He had started to buy a home through the homestead and as payments were impossible after the loss of his position, the homestead was threatening to foreclose. With private care out of the question there remained only two possibilities: either to return to the hospital for completion of treatment or remain at home with no treatment and ultimate hopeless prognosis.

Another case which shows the tragic results of these personality maladjustments in delaying treatment is that of Mr. Frank C., whose diagnosis was squamous cell carcinoma of the tongue, grade 2-3. Mr. C. was 48 years old, white, single and living with his elderly mother and step-father. Until he became too ill to work, Mr. C. was on an Emergency Relief Administration work project. After being taken off work relief, direct relief amounting to \$4.15 a week besides periodic orders for clothing and \$1.25 a week in grocery tickets from St. Vincent de Paul was substituted. When treatment was first instituted the lesion was of two months duration and prognosis was favorable. Admission to the hospital for radium was advised. Upon admission, there was a slight delay in making a plaque in which to apply the radium. Mr. C. became furious and left the hospital insisting

that no one wanted to treat him. A week later the patient was persuaded to be readmitted. Within four days arrangements for the application of radium were completed but Mr. C. felt that if he were not being discriminated against, treatment would have been given immediately following admission. During this admission, two attempts were made to apply radium and each time the patient jerked the plaque away because he thought he was being "butchered". After the second attempt, Mr. C. deserted. He spent the next month securing countless letters from politicians, refusing to report for treatment until a sufficient number were obtained to insure immediate treatment. Upon readmission, however, the lesion had advanced too far except for palliative deep x-ray therapy and for surgical removal of the metastatic cervical nodules. Subsequently, on account of increasing difficulty in swallowing, a gastrostomy had to be performed.

Another case, that of Mr. Charles M., also illustrates this problem. Mr. M. was 55 years old, single and unemployed, having recently lost a job with the Dock Board which had been held for twenty years. He was supported by his sisters and two nieces whom he had reared. Diagnosis was carcinoma of the nose and entire surgical removal of the lesion was advised. Following admission, the operation was scheduled but on account of the lack of operating time it had to be postponed. Mr. M. thought that he was being abused. He was convinced that his job with the Dock Board had been lost as a result of foul play and that the postponement of the operation was another manifestation of this grudge against him. Mr. M's sisters felt that their brother had had a "dirty trick played on him". After much screaming denouncement of the treatment received, part pay care in a private hospital was arranged. The patient and his family are still dissatisfied and suspicious but at least treatment has been received.

None of these patients are true cases of mental disease, but the manifestations in each case prevented prompt treatment and in one case definitely changed the prognosis.

The case of Philman J. shows the problem incurred in arranging for deep x-ray therapy as well as the economic problem. The fact that deep x-ray therapy is given weekly for periods of six weeks with rests of only three to four weeks between the courses of treatment, makes it difficult for patients to remain in New Orleans for so long a time and hospital care during the six weeks period is, of course, unnecessary as well as impossible. This problem is further complicated by the fact that there are no facilities available in New Orleans providing temporary placement for negroes, regardless of diagnosis. There are only two plans which can be made for these patients. One

is to have them stay with relatives or friends in New Orleans during each series of deep x-ray therapy, or, if the patients live in the adjoining parishes, arrangements are made through a local agency to have them report weekly for treatment.

Through the E R A in Iberville Parish it has been arranged that John G. report weekly for deep x-ray therapy. John G. has epithelioma of the lip and prognosis is good with continued treatment. Sarah G. is receiving postoperative radiation following a mastectomy. She lives too far to make weekly trips to New Orleans for treatment and placement with friends in New Orleans has been arranged. As Sarah is unemployable, with no relatives financially able to support her, she receives relief from the Assumption Parish Welfare Organization, and her expenses in New Orleans while receiving treatment are met by this agency. This case is doubly interesting because it shows the lack of follow-up of cases of malignancy outside of the Tumor Clinic. Sarah G. was discovered accidentally two years after the operation. She had no deep x-ray therapy and no periodic examinations since the operation.

It is hoped that ultimately a plan can be evolved whereby all patients with diagnosis of malignancy reporting to Charity Hospital can be followed. In this way continuous medical treatment will be assured and cases in which there are problems delaying or interfering with treatment can be taken under social treatment.

#### J. T. NIX CLINIC NEW ORLEANS

At a meeting held in June, Doctor J. M. Perret presented the following paper.

#### THE HEART IN GOITRE: ANALYSIS OF 29 CASES

That the heart is influenced by the thyroid has been known for a long time. The *modus operandi* is not altogether clear. That there is some interplay between the endocrine system and the heart seems well established. Under physiological conditions the interaction of the sympathetic system, suprarenals, thyroid and heart is beneficial and protective. Crile<sup>1</sup> has shown that in conditions of fright there is an increase of adrenalin thrown into the circulation, the thyroid and heart are stimulated and the animal is prepared to run or fight.

The exophthalmic patient is in a condition of chronic fright—the bulging eyes, tremors, and rapid heart make a typical picture. It is well known that exophthalmic cases are hypersensitive to adrenalin.

Whenever I see a goitre case I am always concerned about the patient's heart. The electrocardiograph gives us valuable information in the study of such patients so that I have reviewed the records of 29 goitre cases that had had electrocardio-

graphic examinations and tabulated the clinical findings in order to get some tangible facts as to the cardiac condition. Parkinson and Cookson<sup>2</sup> in a study of 130 cases of goitre, found that 35, 27 per cent, had auricular fibrillation; 12 had congestive heart failure; 58 had cardiac enlargement. The post mortem of 43 cases of goitre with thyroid intoxication showed cardiac hypertrophy in more than 50 per cent. Within the past few years the relation of the thyroid to angina pectoris and congestive heart failure has been studied. The normal thyroid has been removed with apparently good results. How ablation of the thyroid acts is not entirely clear and it is too soon to predict whether the good results will be permanent.

Purks<sup>3</sup> in a recent article has reviewed the various theories. It has been noticed that in thyrotoxicosis the velocity of the blood flow is increased; in myxedema it is decreased; heart cases with good compensation have a normal flow; those with decreased compensation have a slow flow. The blood flow depends on the metabolic rate, which of course is influenced by thyroid function. In decompensated cases, by removing the thyroid, we decrease the tissue demands so that the slower circulation is sufficient for the tissue needs. In angina the exploration may be that, the tissue needs being less, the heart has less work to perform to meet the body requirements.

The psychic factor, the operation, the preoperative and postoperative treatment, the rest in bed, the nursing, may also be factors. Lyon and Horgan<sup>4</sup> in a survey of 300 cases of hyperthyroidism, in which thyroidectomy with division and ligation of the superior and inferior thyroid arteries had been made five to ten years previously, were struck with the heart improvement of all the cases except those which had had a preexisting organic heart disease. They thus explain this observation: "the cessation of hyperthyroidism and the disappearance of its effects upon the heart were not alone due to the excision of the major portion of the gland, but that the division and ligation of the superior and inferior thyroid arteries by severing the pathways of nerve stimuli from the sympathetic nervous system to the thyroid and by decreasing the amount of blood entering the gland, diminished thyroid activity and prevented regeneration of the remaining tissue. It was also observed that this operation lowered the basal metabolic rate, decreased the circulatory demands, and lessened the work of the heart. The beneficial effects of this operation upon the hearts of the patients studied led us to consider its application in the treatment of angina pectoris and congestive heart failure."

A brief of the analysis of the 29 cases follows:

Kind of goitre: Exophthalmic, 14; colloid, 8; adenomatous, 5; thyrotoxicosis, 2.

Sex: Females, 26; males, 3. All white patients.

## AGE

Decades	Exophthal- mic	Col- loid	Ade- noma	Thyrotoxi- cosis	To- tal
10-20	1	0	0	0	1
21-30	6	3	1	1	11
31-40	5	2	2	1	10
41-50	2	1	0	0	3
51-60	0	2	2	0	4
Total	14	8	5	2	29

Youngest 19 years, oldest 55 years.

75 per cent of the cases occurred between the ages of 21 and 40 years.

## PULSE

	Exophthal- mic	Col- loid	Ade- noma	Thyrotoxi- cosis	To- tal
70-80	1	5	1	1	8
81-90	1	2	1	1	5
91-100	3	0	1	0	4
101-110	2	0	0	0	2
111-120	6	1	1	0	8
121-130	1	0	0	0	1
131-140	0	0	1	0	1
Total	14	8	5	2	29

The tachycardia of the exophthalmic cases stands out in the table.

## BLOOD PRESSURE: SYSTOLIC

	Exophthal- mic	Col- loid	Ade- noma	Thyrotoxi- cosis	To- tal
100-110	0	1	0	0	1
111-120	2	0	2	0	4
121-130	3	4	0	0	7
131-140	1	0	1	0	2
141-150	2	1	1	0	4
151-160	6	0	1	2	9
161-170	0	0	0	0	0
171-180	0	0	0	0	0
181-190	0	1	0	0	1
191-200	0	1	9	0	1
Total	14	8	5	2	29

There is a tendency to hypertension in goitre cases, 51 per cent have a blood pressure over 140.

## BLOOD PRESSURE: DIASTOLIC

	Exophthal- mic	Col- loid	Ade- noma	Thyrotoxi- cosis	To- tal
50-60	3	0	0	0	3
61-70	2	2	1	0	5
71-80	5	3	3	0	11
81-90	2	1	1	0	4
91-100	2	1	0	1	4
101-110	0	1	0	1	2
Total	14	8	5	2	29

The diastolic pressure is normal in the majority of cases.

## BASAL METABOLIC RATE

	Exophthal- mic	Col- loid	Ade- noma	Thyrotoxi- cosis	To- tal
—20—70	0	1	1	0	2
—10—0	1	0	0	0	1
+0—+10	2	3	2	0	7
+11—+20	0	1	2	0	3
+21—+30	0	1	0	1	2
+31—+40	1	1	0	0	2
+41—+50	3	0	0	0	3
+51—+60	2	0	0	0	2
+61—+70	4	1	0	1	6
+71—+80	0	0	0	0	0
+81—+90	0	0	0	0	0
+91—+100	1	0	0	0	1
Total	14	8	5	2	29

65 per cent of the cases had a Basal Metabolic Rate above +10.

## PHYSICAL FINDINGS

	Exoph- thal- mic	Col- loid	Ade- noma	Thyro- tox.	To- tal
Aortic second accentuated	2	1	0	1	4
Angry sounds	17	1	1	0	19
Apical systolic thrill	1	1	0	0	2
Embryocardia	1	1	0	0	2
Enlarged	2	1	1	0	4
Extrasystole	0	0	1	1	2
Gallop rhythm	1	0	0	0	1
Murmur systolic					
Apical	1	0	2	0	3
Second left space	3	3	0	0	6
Third left space	4	1	1	0	6
Precordium all over	4	1	0	0	5
Second right space	1	3	0	1	5
Normal	0	3	2	0	5
Sinus arrhythmia	1	0	0	0	1

Systolic murmurs were present in 25 cases, angry heart sounds in 19. In only 5 cases was the heart considered normal.

## ELECTROCARDIOGRAPHIC DIAGNOSIS

	Exoph- thal- mic	Col- loid	Ade- noma	Thyro- tox.	To- tal
Coronary disease	2	0	1	0	3
Extrasystole auricular	1	0	0	0	1
Extrasystole right ventricular	1	0	1	1	3
Flutter auricular	1	0	0	0	1
L. V. P.	5	4	2	1	12
Myocarditis	2	0	0	0	2
Normal	1	3	1	0	5
R. V. P.	1	0	0	0	1
Sinus irregularity	0	1	0	0	1
Tachycardia	9	1	1	1	12

Left ventricular preponderance and tachycardia



were each present in 12 cases. The electrocardiogram was normal in 5 cases.

The P. R. interval varied between 0.12 and 0.20. The rate varied between 74 and 150 and was regular in 24 cases.

#### SUMMARY

The relation of goitre to the heart is discussed. The preponderance of goitre in females is brought out; 26 females, 3 males.

Seventy-five per cent of the cases occurred between the ages of 21 and 40 years: a period of stress and strain.

Tachycardia is well brought out in the exophthalmic cases.

The blood pressure shows a hypertension in 51 per cent of the cases. This increase is in the systolic pressure, the diastolic pressure is normal in the majority of cases.

The basal metabolic rate was increased in 65 per cent of cases.

The physical examination of the heart showed systolic murmurs in 86 per cent of cases, angry heart sounds in 65 per cent of cases, and tachycardia in 55 per cent. The heart was normal in 5 cases.

The electrocardiogram showed L. V. P. in 12,

tachycardia in 12, coronary disease in 3, extrasystoles of right ventricular origin in 3, myocarditis in 2, extrasystole of auricular origin in 1, auricular flutter in 1, R. V. P. in 1, sinus irregularity in 1. Normal in 5 cases. The absence of auricular fibrillation in our series is striking.

#### CONCLUSION

The majority of goitre cases show cardiac damage. This is more noticeable in the exophthalmic, adenomatous and thyrotoxic cases, much less in the colloid cases.

We can therefore look upon goitre cases as potential heart cases.

#### BIBLIOGRAPHY

- (1) Crile, G. W.; Pathologic Physiology of the Neuroglandular System, Am. Jour. Med. Sci. 189:2, 1935.
- (2) Parkinson J. and Cookson, H.: The Size and Shape of the Heart in Goitre, Quart. Jour. Med., 24:490, 1931.
- (3) Purks, W. K.: Total Thyroidectomy in the Treatment of Congestive Heart Failure and Angina Pectoris, New Orleans Med. and Surg. Jour., 87:7, 1935.
- (4) Lyon, J. A. and Horgan, E.: Dissociation of the Thyroid from the Sympathetic Nervous System and Reduction of the Blood Supply to the Thyroid in Angina Pectoris: A Preliminary Report, South. Med. Jour., 27:12, 1934.

## TRANSACTIONS OF ORLEANS PARISH MEDICAL SOCIETY

During the month of June, besides the regular meeting of the Board of Directors, the Society held one joint Clinical Meeting with the Charity Hospital Staff in the Miles Amphitheatre, Charity Hospital, and one regular Scientific Meeting.

At the Clinical Meeting held June 10, cases were presented as follows:

Drs. U. W. Giles and E. A. Bertucci—3 cases of a new treatment of diabetes.

Dr. Vernon Sims—Sacral anesthesia.

Dr. H. Theodore Simon—Operative procedure for dislocated shoulder.

Dr. J. G. Stulb—Infantile paralysis with treatment of whole blood.

Dr. A. H. Storck—Pancreatic cyst.

Dr. G. C. Anderson—Extensive fracture of the skull with infection.

Dr. Isidore Cohn—Arterio-venous aneurysm with report of case.

Dr. Sydney Jacobs—Infantilism.

The following program was presented at the Scientific Meeting held June 24:

Case report. Bilateral Adolescent Coxa Vara. (Femoral Epiphyseal Slip.)

By: \_\_\_\_\_ Dr. H. Theodore Simon  
Trichiniasis in Louisiana.

By: \_\_\_\_\_ Dr. E. Harold Hinman

Discussed by \_\_\_\_\_ Dr. R. D'Aunoy  
Clinical Aspects of Trichiniasis.

By: \_\_\_\_\_ Dr. R. H. Kampmeier

Discussed by: \_\_\_\_\_ Dr. Edgar Hull

Pituitary Infantilism.

By: \_\_\_\_\_ Dr. Sydney Jacobs

Discussed by \_\_\_\_\_ Dr. I. I. Lemann

Two members of the Society were nationally honored during the past month. Dr. Foster M. Johns assumed the Presidency of the American Society of Clinical Pathologists at the annual meeting in Atlantic City.

Dr. L. R. DeBuys was elected Vice-President and President-Elect of the American Academy of Pediatrics at the annual meeting held at the Waldorf-Astoria Hotel, New York City.

The following doctors attended the meeting of the American Medical Association at Atlantic City: Drs. Elizabeth Bass, W. R. Buffington, Ansel Caine, B. G. Efron, J. B. Elliott, E. S. Hatch, Geo. H. Hauser, F. M. Johns, Edward L. King, Maurice Lescale, John H. Musser, Alton Ochsner, P. B. Salatch, Wm. H. Seemann, Daniel N. Silverman, Sidney K. Simon, Robert A. Strong, C. J. Tripoli, J. Ross Veal, E. von Haam, H. W. E. Walther, and Herbert L. Weinberger.

Beginning Saturday, June 8 and until Monday, September 9 the offices of the Society close at 12 noon on Saturdays and 4 P. M. week days.

Following the regular Second Quarterly Executive Meeting of Monday, July 8, the Society will go into summer recess until October 14.

Drs. Ralph Lampert and B. C. MacLean resigned from Active Membership because of removal from the city.

Dr. Harris Hosen moved out of the State.

Drs. Philip J. Bayon, A. F. Brock and Samuel Sternberg were elected to Active Membership.

The following applications for Active Membership are posted: Drs. Frederic W. Brewer, Geo. P. Lilly, Jos. H. Larose, Chas. McVea, Amedee Mary, John O. Redding, Jr. and Chas. J. Wheeler.

Drs. Rudolph Matas and Alton Ochsner attended the meetings of the American Surgical Association in Boston and the American Thoracic Association.

Dr. H. L. Kearney attended the American Bronchoscopic Society meeting and the American Triological Society meeting at Toronto.

#### TREASURER'S REPORT

ACTUAL BOOK BALANCE: 4/30/35.....	\$1,650.22
May receipts: .....	\$ 555.04
TOTAL CREDITS: .....	\$2,205.26
May expenditures: .....	\$ 739.05
ACTUAL BOOK BALANCE: 5/30/35.....	\$1,466.21

#### LIBRARIAN'S REPORT

Thirty-two books have been added to the Library during May. Of these 11 were received by binding, 9 by gift and 12 from the New Orleans Medical and Surgical Journal.

On request of physicians, members of the staff have collected material on the following subjects:

- Constipation.
- Cancer in infants.

- Poisoning from eyelash dyes.
- Epidural injections for relief in sciatic pain.
- Mastopexy.
- Lobectomy.
- Calcification.
- Duochrome vision test.
- Keratometry for astigmatism.
- Migraine.
- Urticaria.
- Serum lipase with regard to thyroid.
- Malignant lesions of the breast.
- Breecch presentation.
- Lung abscess.
- Medical ethics.
- Pseudochromesthesia.
- Calpocystotomy.

The Library has loaned to doctors alone during May, 705 volumes,—or an average of 1.4 to each member of the Society. The daily average was 26. This is exclusive of all use of the Library by students and the use of all material within the Library.

The Library will be closed at night during the months of June—September.

#### NEW BOOKS

- Sutton, R. L.—Diseases of the Skin. 1935.
  - Rose, W. D.—Physical Diagnosis. 1935.
  - Springston, Humphreys—Doctors and Juries. 1935.
  - Henry Phipps Institute—Report. v. 25. 1934.
  - American Neurological Association—Transactions. 1934.
  - Haggard, H. W.—Doctor in History. 1934.
  - Meaker, S. R.—Human Sterility. 1934.
  - Kemp, H. W.—How to Practice Medicine. 1935.
  - Maliniak, J. W.—Sculpture in the Living. 1934.
  - Safian, Joseph—Corrective Rhinoplastic Surgery. 1935.
  - Wiener, A. S.—Blood Groups and Blood Transfusion. 1935.
  - Hertzler, A. E.—Surgical Pathology of the Peritoneum. 1935.
  - Emerson, C. P.—Nervous Patient. 1935.
  - Heaton, C. E.—Modern Motherhood. 1935.
- H. B. Alsobrook, M. D.,  
Secretary

## LOUISIANA STATE MEDICAL SOCIETY NEWS

## CHAIRMEN OF SECTIONS

The following Chairmen of Scientific Sections for the approaching meeting of the Louisiana State Medical Society in Lake Charles, April 27, 28, and 29, 1936, have been appointed by the President, Dr. Courtland P. Gray.

Medicine and Therapeutics—Dr. T. H. Watkins, Lake Charles.

Pediatrics—Dr. Robert A. Strong, New Orleans.

Nervous Diseases—Dr. Frederick L. Fenno, New Orleans.

Bacteriology and Pathology—Dr. Foster M. Johns, New Orleans.

Public Health and Sanitation—Dr. H. S. Smith, Thibodaux.

Gastro-Enterology—Dr. Daniel N. Silverman, New Orleans.

General Surgery—Dr. James E. Walsworth, Monroe.

Gynecology and Obstetrics—Dr. D. C. McBride, Alexandria.

Eye, Ear, Nose, and Throat—Dr. H. F. Brewster, New Orleans.

Urology—Dr. Frank J. Chalaron, New Orleans.

Radiology—Dr. D. M. Moore, Monroe.

Orthopedic Surgery—Dr. Guy A. Caldwell, Shreveport.

Those desirous of reading papers should communicate with the various chairmen as promptly as possible. The program for each Section must be in the hands of the Secretary-Treasurer not later than February 27, 1936.

## TULANE CENTENNIAL CELEBRATION

The centenary of the Tulane Medical School and the University was fittingly celebrated from June 8 to 12 by a variety of meetings, clinics, banquets, and other forms of entertainment. At the graduation exercises the chief speaker was Dr. John M. T. Finney of Baltimore, who received also the degree of Doctor of Laws. This degree was likewise awarded to Dr. George H. Whipple of Rochester, New York, one of the co-receivers of the Noble prize last year. Dr. James M. Mason of Birmingham received the honorary degree of Doctor of Science.

## ST. TAMMANY PARISH MEDICAL SOCIETY

St. Tammany Parish Medical Society met in regular session with the following members present: Drs. Frank Young, Karl Young, R. B. Paine, Lawrence Young, John K. Griffith, H. D. Bulloch, F. R. Singleton, W. L. Stevenson. President Carl Young in the Chair and Secretary H. D. Bulloch, at his desk. The minutes of the previous meeting read and approved as read.

The Committee on Resolutions in respect to Dr. Hebert and Dr. Durel, reported and their report accepted and the committee discharged.

Under the head of miscellaneous business, the membership engaged in a round table discussion of the manner in which the E.R.A. handled the medical end of their work in the Parish, and as a result of the discussion, the Secretary was instructed to write the Secretary of the State Medical Association for advice as to the proper procedure to follow, that would ultimately tend to correct the situation.

There being no further business to come up, the Secretary called on Dr. Carl Young, who had very graciously consented to pinch hit for him. Dr. Young brought to the attention of the Society, the news item, of the month of June, Times-Picayune, "Scientist shows new way to cure brain maladies." Dr. Geo. M. Retan, Syracuse School of Medicine, brought to the attention of A. M. A. then meeting in Atlantic City, his method of doing perivascular drainage. This treatment was shown to be very successful in infantile paralysis, locomotor ataxia, and encephalitis.

Dr. Carl Young elaborated on the subject to some extent, showing us how he had been using the method for some time, in his private practice at Shreveport and more since he had been associated at the Fenwick Sanitarium. He, too, speaks very highly of the treatment and says that he has used it in several cases of encephalitis, and had remarkable results. The Doctor brought to the meeting the equipment necessary to institute this drainage, explained it, making it appear as very simple.

Meeting adjourned to meet again in September. at Covington, Southern Hotel.

Dr. Carl Young, President,

Dr. H. D. Bulloch, Secretary.

## CLAIBORNE PARISH MEDICAL SOCIETY

The Caliborne Parish Medical Society held its Quarterly Meeting at the City Hall in Haynesville, June 11. Papers were read by Dr. M. J. Rivenbark of Haynesville on Peptic Ulcers and by Dr. J. E. Batchelor of Haynesville on Diarrhea in Children.

There was a large attendance at the meeting. The next meeting is to be held in Homer on September 10.

H. R. Marlatt, M. D.,

Sec.-Treas.

## ATTENDANCE AT THE AMERICAN MEDICAL ASSOCIATION

A list of physicians from New Orleans who attended the recent meeting of the American Medi-

cal Association in Atlantic City is recorded in the Orleans Parish Medical Society section of the Journal. In addition to these physicians, there were also in attendance the following men from Louisiana: Drs. H. C. Hatcher, Baton Rouge; J. W. Scott, Rochelle; Charles D. Brunt, Iota; S. R. Henry, Crowley; Robert Kapsinow, Lafayette; James Q. Graves, Monroe; Arthur A. Herold, C. P. Rutledge, Dean H. Duncan, all of Shreveport.

#### NEWS ITEMS

Prof. Elizabeth Bass, of the faculty of the Graduate School of Medicine of The Tulane University of Louisiana, attended the recent meeting of the Medical Women's National Association and the meeting of the American Medical Association held at Atlantic City, N. J.

Announcements have been received of the marriage of Miss Marion Hirsch to Dr. Harry Meyer of the faculty of the Graduate School of Medicine of The Tulane University of Louisiana, which was solemnized at the residence of the bride's family on Tuesday, June 11, 1935. Dr. and Mrs. Meyer left the same evening on a motor trip to St. Louis and Chicago and will be absent about two weeks.

Prof. Charles J. Bloom of the faculty of the Graduate School of Medicine of The Tulane University of Louisiana conducted Pre-School Round Ups at Picayune, Miss., on June 7 and at Bay St. Louis, Miss., on June 14. On June 19 he will address the Third District Medical Society at Franklin, La., on "Vaccine Antitoxin and Toxoid Therapy in Pediatrics."

Dr. C. C. Dauer of the faculty of the Graduate School of Medicine of The Tulane University of Louisiana has been invited to attend the Health Officers Conference to be held at Washington, D. C., during the week beginning June 16.

The Latin American Congress of Physical Therapy, X-ray, and Radium will hold its first annual meeting in Mexico City from August 29 to September 5, it was announced today by Dr. Cassius Lopez de Victoria, executive director of the organization. The National University of Mexico will act as host to their North American colleagues, and the government will participate in extending hospitality to the delegates.

#### HEALTH OF NEW ORLEANS

The Department of Commerce, Bureau of Census, reports that for the week ending May 11 there were 126 deaths in the City of New Orleans, divided 72 white and 54 colored, with a death rate for the group as a whole of 13.6, for the white 11.0, and for the colored 20.2. The infant mortal-

ity this week was 53, largely as a result of the mortality rate of 126 among the negro population of the City. The week ending May 18 saw an increase in the death rate, 16.2 as a result of the death of 150 people in the city, 89 of whom were white and 61 colored. The rate for the former group is 13.6 and for the latter 22.8. The infant mortality rate for this week was 71. The week ending May 25 saw a drop in the total deaths to 131 with a rate of 14.2, 81 of whom were white with a death rate of 12.4, and 50 colored with a rate of 18.7. The infant mortality rate this particular week was 95. The next week the rate had jumped up to 16.1 for the total population, with the white death rate being 13.3, and the negro 23.2. There were 149 deaths, divided 87 white and 62 colored. The infant mortality rate was only 41. For the week ending June 8, there was very little change in the death rate, rising to 16.4 as a result of 2 more deaths than in the preceding week. Ninety-five of these were in the white race and 56 in the negro, with the rate for the former of 14.5 and the latter group 20.9. The infant mortality rate was 101.

#### INFECTIOUS DISEASES IN LOUISIANA

Dr. J. A. O'Hara, Epidemiologist for the State of Louisiana, has furnished us with the weekly morbidity reports for the State of Louisiana, which contain the following summarized information: For the week ending May 18, the twentieth week of the year, there were reported in double figures the following diseases: Fifty-six cases of measles, 35 of syphilis, 34 of pulmonary tuberculosis, 32 of gonorrhea, 17 of diphtheria, 15 of malaria, 13 each of pneumonia and typhoid fever, and 12 of cancer. Four cases of poliomyelitis were reported from Orleans Parish and 2 cases of typhoid fever from Webster Parish. For the week ending May 25, syphilis with 82 cases led all other reportable diseases. Next in order came 44 cases of gonorrhea, 34 of malaria, 24 of measles, 23 of tuberculosis, 19 of pneumonia, 14 of cancer, and 13 of diphtheria. Two cases of poliomyelitis were reported this week as well as 3 cases of tularemia. For the following week ending June 1, there were reported 38 cases of measles, 37 of malaria, 29 of pulmonary tuberculosis, 21 of syphilis, 17 of cancer, 16 of pneumonia, 15 of diphtheria, and 10 of gonorrhea. In this week there were reported 4 cases of poliomyelitis. For the twenty-third week of the year, which ended June 8, there were listed 36 cases of measles, 35 of malaria, 24 of syphilis, 20 of cancer, 19 of pulmonary tuberculosis, 12 of typhoid fever, and 11 of pneumonia. There were 2 cases of poliomyelitis recorded this week. It should be noted that in the four weeks of this report there were listed 12 cases of the much to be dreaded disease, poliomyelitis.



## CORRESPONDENCE

Covington, Louisiana,

May 30, 1935.

To the friends and well-wishers of the Chinchuba Deaf Mute Institute:

We are officially authorized to state that the Chinchuba Deaf Mute Institute, in all probability, will not be removed from Chinchuba, but modern fire-proof buildings will be erected on the site of the old buildings that were destroyed by fire last fall.

Due to a number of problems that have arisen, the correct decision of which is necessary in order to insure the complete success of the campaign, and as the time is so limited, it has been decided to change the date of the opening of the campaign from June 9th to a later date, due notice of which will be given state-wide publicity.

We feel certain that the many friends of Chinchuba will be most happy at this announcement, and will do all in their power to make the coming campaign a success.

We wish to take this opportunity of thanking our Advisory Board, our Parish Chairmen, the city and state press, the theatres, the radios, and many, many others who have so generously given their support to this movement, and, while the campaign is unavoidably delayed for a few weeks, we trust that when the date is definitely fixed, they will still continue to give the same generous co-operation and support to the Chinchuba Deaf Mute Institute re-building fund campaign. There is no more worthy or appealing charity.

Harvey E. Ellis  
Executive Secretary

Wm. H. Byrnes, Jr.  
State Chairman

#### RESOLUTION ON THE DEATH OF DR. NUMA M. HEBERT

Whereas, it has pleased Almighty God in His wisdom to remove from our midst, Dr. Numa M. Hebert, and

Whereas, we most humbly bow to the will of Him "Who doeth all things well" our hearts are made sad at the thought of giving him up and

Whereas, Dr. Hebert who graduated in Medicine in 1869, practiced in Washington and Pointe-a-la-Hache for more than twenty-five years, moved to Covington in 1895 where he engaged in the Hotel business, operating the famous Claiborn Hotel, and

Whereas, the Doctor had given up the profession he dearly loved, he continued his interest in organized Medicine, maintaining his membership in the State Society and assisted in the organization of the St. Tammany Parish Medical Society. He remained a member of these Societies until his death, and took an active part as long as he was physically able, and

Whereas, he never held public office, he was always deeply interested in public affairs conducted himself as a Christian gentleman on all occasions.

Therefore, be it resolved, that the St. Tammany Parish Medical Society in the passing of Dr. Hebert, lost one of its most valued and beloved members and that we extend to his family and relatives our deepest and sincere sympathy and trust that the upright and beautiful life he lived will temper the grief which they suffer,

Be it resolved, that a copy of these resolutions be spread upon our minutes and a copy be sent to his family, a copy of the New Orleans Medical Journal and a copy to the St. Tammany Farmer, our official journal.

Roland Young, M. D.  
H. E. Gautreaux, M. D.  
W. L. Stevenson, M. D.  
H. D. Bulloch, M. D.

#### RESOLUTION ON THE DEATH OF DR. WALLACE J. DUREL

Whereas, the Almighty God, in His wisdom, has seen fit to call from this vail of tears, Dr. Wallace J. Durel, and

Whereas, Dr. Durel was an honorary member of our Society, a resident of our Parish some twenty-five years or more, conducting a Sanitarium in our midst for the treatment of Tuberculosis, the disease that he had so much work in, and had contributed so much in the development of the present day methods of prevention and treatment, being a pioneer in the development of artificial pneumothorax and etc., and

Whereas, he was so much disposed to impart his knowledge to the Profession, knowledge that he had gained in private practice and in hospital practice, attending many of the National Tuberculosis Association meetings imparting his views and thereby contributing to the success of such meetings,

Now therefore be it resolved, that we the members of the St. Tammany Parish Medical Society feel keenly his loss and convey to his family our heartfelt sympathy and condolence.

Be it further resolved, that a copy of these resolutions be spread on the minutes of this Society, a copy sent to the family, a copy furnished the New Orleans Medical and Surgical Journal and a copy turned over to the local paper, St. Tammany Farmer.

Roland Young, M. D.  
H. E. Gautreaux, M. D.  
W. L. Stevenson, M. D.  
H. D. Bulloch, M. D.

#### DIED

Wilbert, Ben G., Plaquemine, La. Born in 1884. Graduated from Tulane University School of Medicine in 1906. Dr. Wilbert was a member of the Iberville Parish Medical Society and the Louisiana State Medical Society. He practiced as an eye, ear, nose and throat specialist for many years.

He died in Plaquemine on June 4, after an illness of several weeks. He is survived by his wife, who was Mrs. Grace Wheldon of New Orleans, two sisters and four brothers.

### WOMAN'S AUXILIARY NEWS

The Woman's Auxilliary to the Shreveport Medical Society closed the 1934-25 season May 8th with the election of the following officers:

President, Mrs. F. G. Ellis, 4624 Fairfield  
President-Elect, Mrs. R. T. Lucas, 535 Broadmoor  
1st Vice-President, Mrs. J. T. Crebbin, 1133 Kings-highway

2nd Vice-President, Mrs. B. C. Garrett, 924 Monrovia

Recording Secretary, Mrs. C. E. Webb, 601 Oakley Drive

Corresponding Secretary, Mrs. W. B. Allums, 1123 Janther Place

Treasurer, Mrs. J. E. Knighton, Jr., 650 Oneonta  
Parliamentarian, Mrs. C. P. Rutledge, 4334 Richmond

Press & Publicity, Mrs. Johnson R. Anderson, 148 East Jordan

Excerpts from the President's annual report follow:

"The average attendance at the meetings was about 58 per cent of the membership, which was very good.

"The two major projects of the Shreveport Auxilliary the past year were:

1. Periodic health examinations
2. Fund for the indigent physicians

"The first should be of great importance to you and to your family and your friends. The second is a most worthy cause and one which every auxilliary member should consider her personal obligation.

"No attempt to add to the treasury this year was made with the exception of the Christmas seal sale, which was not as successful as in previous years possibly due to economic conditions and public sentiment. Plans for a benefit bridge party on May 15, were contemplated, the funds of which are to be used for educational work and a donation to the Indigent Physician's Fund. Thanks go to Mrs. M. D. Hargrove and her committee for their untiring efforts and hard work for the success of this affair.

"My best wish is for a 'bigger Auxilliary,' for 'the bigger the better.' You have heard much of the sacrifices of a doctor's wife, but what of her rewards? The Auxilliary is the answer!"

With the idea in mind to convey to our readers the worth and value of the Woman's Auxilliary, we are very proud to give below excerpts from letters recently received which is evidence of the

fact that there is most certainly a very definite need for the Woman's Auxilliary to the medical profession:

"I have observed with much interest the growth of the Woman's Auxilliary since its inception in Dallas, Texas, in 1917. At this time, a small group of women formed the Woman's Auxilliary to the Dallas Medical Society. Later, in 1919, the Texas State organization was formed. Then, in 1922, at the meeting of the American Medical Association, held in St. Louis, the Woman's Auxilliary to that Society was formed. At this time there were only ten States represented, but it is interesting to note that Louisiana was one of the ten.

"To express in words the great good and elevating influence coming as a direct result of the endeavors of the members of the Woman's Auxilliary would be practically impossible. The example set before the public by your organization, that of a periodic examination of Doctors' wives, is most commendable.

"The social and educational features alone are, in my opinion, of such value to anyone as to fully repay them for their membership in your organization.

"The Louisiana State Medical Society is very proud of its Woman's Auxilliary, and as President, I want to assure you that you have my wholehearted support. I thoroughly agree with a past president of the American Medical Society when he said: 'Wherever the medical fraternity has held out a helping hand to the Woman's Auxilliary it has been gratified to find that the work of the Auxilliary flowed along safe and helpful channels, and the result proved worth while'."

Dr. Courtland P. Gray, President,  
Louisiana State Medical Society.

"I consider the Woman's Auxilliary most useful and very necessary to organized medicine. The good work accomplished by the few organizations in the State should be an inspiration to all doctor's wives. The 'pioneer' stage is passed, and I feel sure Louisiana will soon have her quota of organized parish Auxiliaries."

Dr. Chaille Jamison, Past President,  
Louisiana State Medical Society.

Three delegates from Louisiana, Mesdames W. R. Buffington, Edward S. Hatch, Arthur Herold and two alternatives, Mrs. Daniel Silverman and Mrs. Ansel Caine, are attending the Convention of the American Medical Association in Atlantic City, and we wait with a great deal of interest their reports.

Mrs. George D. Feldner, Chairman,  
Press & Publicity Woman's Auxilliary,  
La. State Medical Society.

## MISSISSIPPI STATE MEDICAL ASSOCIATION NEWS

## HONORED

At the recent meeting of the Mississippi State Medical Association, for outstanding service the following were elected:

## Honorary Member

Dr. John H. McLean, Jackson  
Associate Honorary Members  
Dr. C. Cassidy Dunn, New Orleans  
Dr. W. A. Evans, Chicago  
Dr. J. M. T. Finney, Baltimore  
Dr. W. S. Leathers, Nashville

Dr. J. E. Thigpen

Dr. Cargile

Dr. Baugh

Dr. Huff

Dr. Peek

Dr. Vandiver

## DEATHS OF MISSISSIPPI PHYSICIANS

Dr. W. C. Spencer, Verona, May.  
Dr. J. W. Price, Booneville, March.  
Dr. James H. Slaughter, formerly of Greenwood, Mississippi, died at Kilgore, Texas.  
Dr. John Hillman McLain, Jackson, June.

## APPOINTMENTS

Dr. J. R. Hill, president, Mississippi State Medical Association, has announced the following appointments:

Committee to Confer With the New Administrator:

Dr. J. R. Hill, Corinth  
Dr. J. M. Dye, Clarksdale  
Dr. J. W. Lucas, Moorhead  
Dr. L. L. Minor, R. 4, Memphis, Tenn.  
Dr. R. B. Caldwell, Baldwin  
Dr. T. J. Brown, Grenada  
Dr. W. H. Watson, Whitfield  
Dr. H. Lowry Rush, Meridian  
Dr. Joe E. Green, Laurel  
Dr. W. H. Frizell, Brookhaven  
Dr. D. J. Williams, Gulfport  
Dr. Hugh A. Gamble, Greenville  
Dr. Leon S. Lippincott, Vicksburg  
Dr. V. B. Philpot, Houston  
Dr. J. Gould Gardner, Columbia.  
Advisory Committee for Woman's Auxiliary:  
Dr. J. R. Hill, Corinth  
Dr. Leon S. Lippincott, Vicksburg  
Dr. T. M. Dye, Clarksdale  
Dr. F. M. Acree, Greenville  
Dr. Harvey F. Garrison, Jackson.

## A RESOLUTION OF THANKS

Whereas the Commonwealth Fund, with the cooperation of the State Board of Health and Tulane University made it possible to give to the various counties of the state a course of ten lectures in obstetrics, said lectures having been efficiently delivered by Maxwell E. Lapham, M. D., we, therefore, desire to express our gratitude and thanks to the Commonwealth Fund, the State Board of Health, Tulane University and Doctor Lapham for making this valuable course available to the doctors of Mississippi.

Respectfully submitted by the doctors of Smith and Jasper Counties.

Dr. W. S. Simmons  
Dr. C. E. Burnham

Dr. Harrelson  
Dr. Stringer

## MISSISSIPPI STATE BOARD OF HEALTH

As a delegate from the Mississippi State Medical Association, Dr. Underwood attended the meeting of the American Medical Association in Atlantic City on June 10-14. Other meetings in the East which Dr. Underwood attended during this month were: Conference of State and Provincial Health Authorities, June 15 and 16, in Atlantic City; the Surgeon General's Conference of state health officials in Washington on June 17 and 18, and a conference of public health officials on June 19, relative to planning for an expansion of the public health program under recent appropriations by Congress. Dr. Underwood returned to Jackson in time for the Board of Health meeting on June 25, 26, and 27. Examinations for applicants for medical license were held the first two days of the meeting.

Miss Mary D. Osborne, R. N., associate director of child hygiene for the State Board of Health, has been notified by the Commonwealth Fund that she has been awarded a travel scholarship. Miss Osborne will leave the first of August and will visit the Commonwealth Fund Offices and the East Harlem Nursing and Health Service in New York; the health departments in Cattaraugus County, N. Y., and in Boston and Detroit. Several days will be spent in Tennessee at Vanderbilt University and observing the public health programs in Rutherford and Sullivan Counties, Tennessee. The last place on the itinerary is the University of Tennessee at Knoxville.

The Commonwealth Fund has granted the following public health nurses in Mississippi four and one-half months' scholarships for study: Mrs. Brookie Peters, Rolling Ford; Mrs. Edna Edwards, Laurel; Miss Martha Rose Shearer, Lexington; and Miss Annabelle Leser, McComb. All will enter Vanderbilt University in September.

## ILLEGAL PRACTITIONERS IN MISSISSIPPI

*Stanford Kingstey Clauch* (white) from Monterey, California, was tried in Magistrate's Court

May 6, 1935, found guilty and fined \$150.00 and cost, which was appealed to County Court. He plead guilty through his attorney without being present himself, paying fine and cost, and signed a docket that he would not attempt to do any business in Mississippi again at any time.

On account of remarks made about one surgeon's service to a patient, suit was entered by this surgeon, which was compromised out of Court for \$150.00. It is understood that the compromise so far as the surgeon's suit was concerned was settled out of Court more out of sympathy for the reason that Claunch's son had sustained a serious accident in California and his wife was wiring him. The accident to the son was established as a fact by communication with the hospital surgeon in California.

Claunch left immediately for California after signing the docket and paying fine and cost. The Hotel is holding his baggage for balance due on hotel bill.

"Dr." A. Harris (col.) New Orleans, Louisiana.

Dr. W. E. Noblin, Hinds County Health Officer, made affidavit against him. He was charged with practicing medicine, tried in Magistrate's Court on March 27, 1935, was found guilty and fined \$100.00 and cost. Appealed case to County Court. Case called for trial May 17, 1935. On account of absence of Health Officer's witnesses for some reason, the County Attorney advised that case be settled by Harris paying both Magistrate and County Court costs; and fine of \$100.00 was suspended on condition that Harris remain out of Mississippi—which attorney for Harris accepted.

S. H. Rose (white) was tried on May 13, at Liberty, county seat of Amite County, in Justice of the Peace Court, for practicing medicine without a license. A jury was demanded. Result of trial: five acquittal, one for conviction. Rose uses electric appliances, including an electric sweat bath.

Felix J. Underwood,  
Executive Officer.

#### RESOLUTION

The Mississippi State Medical Association, at its recent meeting in Biloxi unanimously adopted the following resolution:

Since high officials in the Federal Government have repeatedly stated their opposition to competitive forms of business that does damage to existing institutions and established business concerns and whereas: the NRA itself was created to prevent destructive competition and whereas: the United States engineers, doing extensive public works throughout the length of the Mississippi River and its tributaries annually solicit and accept bids without regard to existing fee schedules as set up by the different county medical societies in the areas in which such work is being done and whereas: there are now indications that the FERA

and the United States employees compensation commission contemplates this same policy and whereas: the marine service through its first aid stations renders service to any sick or injured person with any private or public boat or vessel on any navigable waters in the United States and rendering such service without any regard whatever as to the private means of such sick or injured persons and whereas: such services are rendered by the first aid physician selected by the Government and are paid for without any regard to fees established in that area by the county medical society.

THEREFORE, BE IT RESOLVED by the Mississippi State Medical Society, that these conditions be speedily called to the attention of our congressional delegation including the two United States Senators; that the American Medical Association, in particular, be urged to take the initiative in correcting these unfair and discriminatory conditions. Be it further resolved that the secretary of the Mississippi Medical Association be instructed to mail a copy of this protest to each County Medical Society and to the secretary of each State Medical Society.

#### OPEN DISCUSSION

In accordance with the action of the Mississippi State Medical Association at the Biloxi meetings, President J. R. Hill has appointed a committee to confer with the new Relief Administrator when he takes up his work. The committee includes the members of the Council.

In order that the committee may know and understand the wishes of the greatest possible number, Dr. D. J. Williams, Chairman of the Council, asks that at a preliminary meeting all members of the Association who may wish appear and freely express their views.

W. H. Frizell,  
Secretary of the Council.

#### CENTRAL MEDICAL SOCIETY

The following resolutions were passed by the Central Medical Society at its regular meeting, May 7, 1935. Copies have been sent to other societies of the State.

WHEREAS: The incidence of unjustified personal damage suits against individuals is increasing; and

WHEREAS: The filing of unjustified malpractice suits against members of the Medical Profession is coincidentally becoming more prevalent; and

WHEREAS: To successfully carry such fraudulent cases through our courts requires the collusion of unscrupulous members of the Medical and Legal profession;—

BE IT RESOLVED THAT: It is incumbent upon the legal and medical professions to break this



vicious union, and upon our courts to discourage such attempts at thus exacting legalized "black-mail."

To this end the Central Medical Society hereby declares its intention and will put into effect the following safe-guards against such reprehensible practices.

1. Every member of the Society is forbidden to give voluntary evidence in any malpractice action, unless the proposed testimony has been previously examined and approved by those designated by the Society for the purpose.

2. That upon notification of the President of the Society by any member of a contemplated malpractice action, the President will immediately appoint an "investigator," who will in the name of the Society call upon the medical witnesses of the plaintiff, to submit to him their proposed testimony in writing.

3. The "investigator" after due and impartial consideration, will then submit the proposed testimony and his remarks thereon to three members "consultants" whom he will select as having had experience in the condition at issue, for their individual opinions in writing.

4. If the result of such investigation, and the weight of the consultants' opinion support the proposed testimony on the part of the plaintiff, his physicians will be encouraged to so testify.

5. If the weight of the investigator's and consultants' report indicate that the proposed testimony will wrongfully disparage the defendant's reputation, and will not serve justice, the investigator will notify the plaintiff's physician that the proposed testimony is not approved, and that members of the Society will appear in court to so state.

6. If, irrespective of such decision and advice, the testimony deemed objectionable is given, the one so offending will be expelled from the Society for unprofessional conduct.

BE IT FURTHER RESOLVED, THAT:—When any member has been thus openly maligned, the Central Medical Society pledges itself to encourage him in entering suit for slander against those so offending, and its members will appear in court whenever they can further such charge.

BE IT FURTHER RESOLVED, THAT:—Copies of these resolutions be sent to the President, Mississippi State Board of Health, and to the President, Mississippi State Medical Association.

BE IT FURTHER RESOLVED, THAT:—The delegates of the Central Medical Society to the Mississippi State Medical Association be instructed to present a copy of these resolutions to the House of Delegates in Biloxi, Mississippi, during May, 1935, for such action as it may see fit.

MISSISSIPPI STATE HOSPITAL ASSOCIATION  
Dr. H. A. Gamble, Greenville, president of the

Mississippi State Hospital Association, has appointed committees for the year as follows:

#### STANDING COMMITTEES—1935-1936

##### Constitution and Rules

W. H. Frizell, M. D., Chairman, King's Daughters' Hospital, Brookhaven  
T. M. Dye, M. D., Clarksdale Hospital, Clarksdale  
R. D. Sessions, M. D., Natchez Sanatorium, Natchez

##### Legislation

J. Gould Gardner, M. D., Chairman, Columbia Clinic Hospital, Columbia  
George E. Adkins, M. D., Jackson Infirmary, Jackson  
J. W. Moody, M. D., Charleston Hospital, Charleston  
V. B. Martin, M. D., Martin Sanatorium, Picayune  
A. B. Harvey, M. D., Tylertown Hospital, Tylertown  
R. J. Field, M. D., Field Memorial Hospital, Centerville  
L. C. Freemster, Jr., M. D., Tupelo Hospital, Tupelo  
R. M. Stephenson, M. D., Holmes County Community Hospital, Lexington  
F. M. Acree, M. D., King's Daughters' Hospital, Greenville  
E. S. Bramlett, M. D., Bramlett Hospital, Oxford  
Miss Annie L. Hollum, R. N., King's Daughters' Hospital, Brookhaven  
Miss Sadie Godbold, R. N., McComb Infirmary, McComb

##### Membership

M. Q. Ewing, M. D., Gilmore Sanitarium, Amory  
E. LeRoy Wilkins, M. D., Clarksdale Hospital, Clarksdale  
Thomas Wolford, M. D., Columbus Hospital, Columbus  
Miss Mary H. Trigg, R. N., Greenwood Leflore Hospital, Greenwood  
F. P. Ivy, M. D., Ivy Hospital, West Point  
Riley W. Burnett, M. D., Biloxi Hospital, Biloxi  
Mrs. Esther Rohrer, R. N., Natchez Charity Hospital, Natchez  
Noel C. Womack, M. D., Jackson Infirmary, Jackson

#### SPECIAL COMMITTEES—1935-1936

##### Community Hospitals

J. R. Hill, M. D., Chairman, Corinth  
W. H. Anderson, M. D., Booneville  
Omar Simmons, M. D., Newton Hospital, Newton  
M. D. Ratcliff, M. D., McComb City Hospital, McComb  
W. H. Brandon, M. D., Clarksdale Hospital, Clarksdale  
C. A. Sheely, M. D., King's Daughters' Hospital, Gulfport  
L. E. Otken, M. D., Greenwood Leflore Hospital, Greenwood

Mrs. J. Oridge, R. N., Holmes County Community Hospital, Lexington

C. H. Harrison, M. D., Philadelphia Hospital, Philadelphia

Mrs. F. P. Ivy, Ivy Hospital, West Point

#### Charity Hospitals

G. Lamar Arrington, M. D., Chairman, Meridian

L. W. Brock, M. D., McComb Infirmary, McComb

H. Ogden, Methodist Hospital, Hattiesburg

C. C. Day, Aberdeen Hospital, Aberdeen

C. A. Everett, M. D., Natchez Charity Hospital, Natchez

W. C. Pool, M. D., Cary

T. H. Rayburn, M. D., Pontotoc Clinic, Pontotoc

Miss Roane Thornton, R. N., Oktibbeha Hospital, Starkville

Miss Hettie Ellzey, R. N., Dr. F. G. Riley's Hospital, Meridian

#### Mental Hospitals

J. M. Acker, Jr., M. D., Chairman, Mississippi State Hospital, Whitfield

F. B. Long, M. D., Oktibbeha Hospital, Starkville

Dr. M. H. McRae, McRae Hospital, Corinth

H. N. Mayes, M. D., Mayes Hospital, New Albany

F. G. Riley, M. D., Dr. F. G. Riley's Hospital, Meridian

Miss Mary E. Cook, R. N., Tupelo Hospital, Tupelo

Mrs. Tama B. Tatum, Jackson Infirmary, Jackson

#### Public Relations

E. C. Parker, M. D., Chairman, King's Daughters' Hospital, Gulfport

Mrs. Maud E. Varnado, R. N., Laurel General Hospital, Laurel

P. L. Fite, M. D., Fite Hospital, Columbus

C. E. Catchings, M. D., Woodville

George A. Brown, M. D., Water Valley Hospital, Water Valley

Henry Boswell, M. D., Sanatorium

Mrs. K. T. Klein, Meridian Sanatorium, Meridian

Mrs. Omar Simmons, R. N., Newton

#### Minimum Standards

B. B. Martin, M. D., Chairman, Vicksburg Infirmary, Vicksburg

Miss Mary E. Dorsey, R. N., King's Daughters' Hospital, Greenville

W. Jeff Anderson, M. D., Anderson Infirmary, Meridian

C. M. Speck, M. D., New Albany Hospital, New Albany

L. F. Morris, Macon Hospital, Macon

E. W. Holmes, M. D., Winona Infirmary, Winona

T. E. Ross, Jr., M. D., Methodist Hospital, Hattiesburg

W. H. Sutherland, M. D., Northeast Mississippi Hospital, Booneville

Miss W. B. Rankin, R. N., Columbia

W. K. Stowers, M. D., Natchez Sanatorium, Natchez

H. F. Shands, M. D., Baptist Hospital, Jackson

#### Nurse and Nursing

A. Street, M. D., Chairman, Vicksburg Sanatorium, Vicksburg

Miss Kate Lou Lord, R. N., Methodist Hospital, Hattiesburg

W. W. Diamond, M. D., Magee General Hospital, Magee

Mrs. Hattie G. Bauer, R. N., Natchez Sanatorium, Natchez

J. C. Culley, M. D., Oxford Hospital, Oxford

Mrs. Etta Dudley, R. N., Grenada Hospital, Grenada

#### Publication

Leon S. Lippincott, M. D., Chairman, Vicksburg Sanitarium, Vicksburg

J. K. Avent, M. D., Grenada Hospital, Grenada

Felix J. Underwood, M. D., Jackson

#### Hospitalization Insurance

V. B. Philpot, M. D., Chairman, Houston Hospital, Houston

H. Lowry Rush, M. D., Rush's Infirmary, Meridian

E. E. Benoist, M. D., Natchez Sanatorium, Natchez

Mrs. Karenza Gilfoy, Baptist Hospital, Jackson

I. C. Knox, M. D., Vicksburg Hospital, Vicksburg

R. H. Cranford, M. D., Laurel General Hospital, Laurel

Mrs. Lettie Usher, R. N., Aberdeen Hospital, Aberdeen

Miss Sue Collins, R. N., Biloxi Hospital, Biloxi

#### Hospital Taxation

G. D. Stanley, Chairman, King's Daughters' Hospital, Greenville

J. Rice Williams, M. D., Houston Hospital, Houston

W. H. Parsons, M. D., Vicksburg Hospital, Vicksburg

K. T. Klein, M. D., Meridian Sanitarium, Meridian

B. T. Whitfield, Corinth Hospital, Corinth

Walter LeRoy Legg, Geo. C. Hixon Memorial Hospital, Electric Mills

Sidney A. Head, Columbia

Miss M. F. Cotter, Jackson Infirmary, Jackson

#### Hospital Staff Rules and Regulations

J. P. Wall, M. D., Chairman, Baptist Hospital, Jackson

A. J. Stacey, M. D., Tupelo Hospital, Tupelo

Ashton Toomer, Houston

Louise Farnes, R. N., Clarksdale Hospital, Clarksdale

G. M. Street, M. D., Vicksburg Sanitarium, Vicksburg

#### TUBERCULOSIS ABSTRACTS

##### National Tuberculosis Association

Climate as a factor in the treatment of tuberculosis furnishes a subject for perennial discussion. A skilled statistician with medical consultation has devised a new approach to the question. He has made a nation-wide application of certain

well-recognized standards of measurement with interesting results. His paper was presented before the annual meeting of the American Association for the Advancement of Science held in Pittsburgh on December 28, 1934.

This statistical analysis covered 19 elements which on the basis of *a priori* reasoning might be expected to influence the tuberculosis death rate. The nineteen elements were classified into two main groups: climatic, including latitude, altitude, average annual temperature, annual temperature range, daily temperature, annual precipitation, relative humidity, sunshine, and wind velocity; non-climatic including per capita personal income, occupational index, population density, per cent of the white population urban, per cent of the white population (10 years of age and over) illiterate, per cent of the white population foreign-born, per cent of the population colored excluding Mexicans, expenditures for public elementary and secondary schools per capita of the population 5 to 17 years of age, and expenditures by universities, colleges, and professional schools per capita of the population 18 to 23 years of age. The 19th element, the average death rate for the years 1928, 1929 and 1930 from all causes other than pulmonary tuberculosis, violence, and accidents per 100,000 of the white population adjusted for age might presumably reflect both climatic and non-climatic influences.

A study of the relation of each of the nineteen elements to each other and to the average pulmonary tuberculosis death rate from 1928 to 1930 for the white population, adjusted for age differences, resulted in the elimination of twelve of the elements as showing no connection with the variations in the pulmonary tuberculosis death rate in the 42 states. The remaining elements were altitude, daily temperature range, precipitation, sunshine, occupational index, illiteracy, and school expense. These seven elements combined were found to be conclusively significant and might be expected to account for the major part of the variations in the tuberculosis death rates between the different states. The four climatic factors were about equal in importance to the three non-climatic elements, the degree of dependence of the death rate upon them being distributed as follows: illiteracy, 40 per cent; sunshine, 30 per cent; altitude, 13 per cent; expenditures of public and elementary schools, 11 per cent; annual precipitation, 4 per cent; daily temperature range, 1 per cent; occupational index, 1 per cent. It is interesting to note that the non-climatic factors found to influence the pulmonary tuberculosis death rate were, in general, indicators of standards of education rather than measures of economic condition or population density. The analysis indicated that negligible significance was attached to economic conditions as measured by per capita income or to

exposure to infection as represented by population density, per cent of the white population urban, and variation in occupation.

The states were combined into five geographical divisions, each of which represented fairly uniform conditions. A comparison of the pulmonary tuberculosis death rate in each division with the rate to be expected on the basis of the climatic factors and the rate to be expected on the basis of the non-climatic factors showed that as the death rate declined, the expected rate also declined in approximately the same proportion. The South, which experienced the highest death rate, also had the highest expected rate. The North had almost exactly the expected death rate. The particularly favorable non-climatic factors in the Pacific Northwest served to lower the death rate below that which might be expected from the not especially favorable climatic condition. The relatively low death rate in the West Central division might be accounted for by relatively favorable conditions, both climatic and non-climatic. Since the non-climatic factors in the Rocky Mountain States were not appreciably more favorable than in the West Central and Pacific States, the remarkably low death rate for the semi-arid high altitude mountain states seemed to be explained satisfactorily only on the basis of uniquely favorable climatic conditions.

The five states with the lowest tuberculosis death rates for the white population had an average of 21.4 deaths per 100,000 of the population, and the five states with the highest rates averaged 73.8 deaths per 100,000 of the population. It may be of interest to note that the low death rate group averaged 4,090 feet in altitude and the high death rate group 482 feet. The annual precipitation average of the first group was 17.7 inches while that of the five states with the highest tuberculosis death rates was 43.5 inches. The low death rate group also has substantially lower relative humidity, greater daily temperature range, and more hours of sunshine. It would seem, therefore, from the analysis of this comprehensive investigation, that, in so far as the United States is concerned, high standards of education combined with a life in a dry, sunny climate of high altitude are far more important than large per capita income and low population density in reducing to a minimum the death rate from pulmonary tuberculosis.

#### ADAMS COUNTY MEDICAL SOCIETY

The Adams County Medical Society held two special meetings and a regular monthly meeting during May.

The special meetings were held for the purpose of instructing our delegates to the state meeting relative to our stand on fee schedules for work done for the F.E.R.A., and for the purpose of protesting against the prevailing system of competi-

tive bidding now obtaining for medical services rendered federal employees.

At the regular meeting five very interesting case reports were well received and discussed by members present.

W. K. Stowers, Secretary.

#### CENTRAL MEDICAL SOCIETY

The regular monthly meeting was held with a chicken dinner at the Robert E. Lee Hotel Roof. This was well attended by the members and two visitors, Doctors McKinnon and Ross of Hattiesburg.

The report of the state medical meeting was made by the delegates.

Dr. D. W. Jones gave a very instructive as well as humorous talk on the election of the president at the last state meeting. This was apparently enjoyed very much by this society.

The president-elect, Dr. H. F. Garrison, Sr., made a short talk in response. This meeting was dedicated to the president-elect and the State Medical Association.

It was brought to the attention of the society that the council failed to act favorably on the unanimous petition presented by the Leake County physicians to join the Central Medical Society.

L. W. Long, Secretary.

#### EAST MISSISSIPPI MEDICAL SOCIETY

The East Mississippi Medical Society held its semi-annual meeting Thursday, June 6, in the Lamar Hotel, Meridian. Registration showed 75 physicians and about 30 visitors also in attendance. The luncheon was well attended and was presided over by Dr. T. E. Royals as toastmaster. Music was furnished by Bill Lancaster and Ruth Richardson. Short but interesting talks were made by the following: Dr. H. S. Gully, president of the Lauderdale County Medical Society, who tendered the banquet to the visiting physicians; Drs. M. H. Clark, DeKalb, T. L. Bennett, H. L. Arnold, A. C. Bryan, Meridian; T. J. Kilpatrick, Noxapater; Dudley Stennis, Newton; L. H. Jorstad, St. Louis; E. F. Hand, Sr., Waynesboro; W. R. Hand, Philadelphia; and A. L. Thaggard, Madden.

The program presided over by the president, Dr. H. L. Arnold, was as follows:

Modern Methods of Anaesthesia. Moving Picture, by Courtesy of Winthrop Chemical Company, Inc. Shown by Dr. Leslie V. Rush, Meridian.

General Problems of Urology.—Dr. Julian T. Bailey, Meridian.

Modern Obstetrical Care.—Dr. Maxwell E. Lapham, Jackson.

Diagnosis and Treatment of Early Malignancy of the Gastro-Intestinal Tract.—Dr. Louis H. Jorstad, St. Louis.

Malaria, Motion Pictures continued.

Some Practical Points in the Treatment of Fractures.—Dr. Walter E. Johnston, Vicksburg.

Treatment of Early Malignancy of the Breast and Cervix.—Dr. Jorstad.

Dr. Beverley Smith, a recent graduate of Tulane, having taken his internship in Johns Hopkins Hospital and now associated with East Mississippi State Hospital, was received into membership of the society.

Next meeting is to be held in Meridian the first Thursday in December. Officers for 1936 will be elected at this meeting.

T. L. Bennett, Secretary.

#### ISSAQUENA-SHARKEY-WARREN COUNTIES MEDICAL SOCIETY

The regular monthly meeting of the Issaquena-Sharkey-Warren Counties Medical Society was held at the Elks Club, Vicksburg, June 11. After supper served at 7 p. m., the following scientific program was presented:

Obstetrics and Gynecology, Dr. R. A. Street, Jr., Acting Chairman.

Electrosurgery and Its Application In Gynecology (Lantern Slides).—Dr. L. W. Long, Jackson.

Discussed by Drs. A. Street, H. H. Johnston, L. S. Lippincott, and W. E. Johnston. Dr. Long closed.

Report of Morbidity and Mortality in One Hundred Consecutive Cases.—Dr. R. A. Street, Jr.

Discussed by Drs. J. A. K. Birchett, Jr., and Robert McLean. Dr. Street closed.

Motion Picture—"Modern Methods of Anesthesia."—Courtesy of Winthrop Chemical Company Inc., New York.

Dr. W. E. Johnston, as exchange essayist, made a report of the recent meeting of the East Mississippi Medical Society.

The delegates from this society to the Mississippi State Medical Association, Dr. J. A. K. Birchett, Jr., Dr. W. H. Scudder and Dr. W. C. Pool, made reports of the recent meeting at Biloxi.

A resolution having to do with medical practice conditions, and recently adopted by the Mississippi State Medical Association, was received from the secretary of the state association and read.

Resolutions passed by the Central Medical Society and presented to the Mississippi State Medical Association at its recent meeting, and having to do with damage suits, was read and referred to the Committee on Public Health and Legislation for study and report.

Dr. F. Michael Smith, President, presided. Thirteen members and four guests were in attendance.

The next meeting of the Society will be held Tuesday, July 9. The subject will be Urology and the committee in charge are Dr. G. P. Sanderson, chairman, Drs. S. W. Johnston, A. Street, T. P. Sparks, Jr., and W. A. Smith. The program will in-



clude a paper, "General Problems of Urology," by Dr. Julian T. Bailey, Meridian, exchange essayist from the East Mississippi Medical Society; a paper, "Urethral Stricture," by Dr. T. P. Sparks, Jr.; and a motion picture, "Spinal Anesthesia," courtesy of the Winthrop Chemical Company, Inc., New York.

Leon S. Lippincott, Secretary.

#### TALLAHATCHIE COUNTY MEDICAL SOCIETY

The Tallahatchie County Medical Society met in regular monthly session at Camp Talleha, Thursday evening at 4 o'clock. There were about twelve physicians present. Target shooting and social activities were engaged in for a couple of hours after which a squirrel stew and fish dinner were served by the Boy Scout Camp cooks. All present went away well compensated for their trip to the camp.

Captain Crago, the Boy Scout executive, and Judge John Kuykendall were guests at the meeting.

J. W. Moody.

#### CLARKSDALE HOSPITAL

I constantly receive your requests for news for your Journal, and generally feel I have nothing to say that you wouldn't get more intelligently probably from Dr. Wilkins. But I feel rather like a slacker not to ever reply, so although you will probably get this item from another source too, will do my bit this time.

Dr. T. G. Hughes, prominent physician and surgeon of Clarksdale, was severely injured in a serious automobile accident on Friday, May 24, just outside the city limits. He suffered a severe scalp wound and broken left leg. Both bones below the knee joint were splintered. After a few days at the Clarksdale Hospital, Dr. Hughes was moved to Dr. Willis Campbell's Clinic in Memphis, where last Saturday he underwent an open operation on the leg.

Dr. Hughes has long been a practicing physician in Clarksdale and has a great many friends who are anxiously awaiting good news from his bedside. He has been interested in the growth of the Clarksdale Hospital since its erection, and has endorsed every civic movement for the betterment of the city at all times.

I enjoyed the State Hospital Association at Biloxi and certainly feel that personal contact means a great deal. I especially enjoyed Dr. Boswell's extemporaneous but inspired talk, also that of Dr. Mitchell, formerly at the State Hospital.

Louise Francis.

#### DR. F. G. RILEY'S HOSPITAL, MERIDIAN

Dr. F. G. Riley has just completed a twenty-room addition to his present twenty-five bed hospital.

Included in this addition are offices for his medical staff, new elevator, ambulance entrance, new x-ray and physiotherapy department, isolation room, room for colored patients, dining room, one additional operating room (which gives a unit of two operating rooms, with sterilizing, nurses' and scrub rooms connecting the two), surgeons' dressing room with shower bath, the rest of the rooms being private patients' rooms.

This gives the present hospital setup, including all rooms in the completed unit, a total of sixty-four rooms, with thirty-five private patient rooms.

This hospital originally opened five years ago, primarily as a children's and maternity hospital and clinic, with a total bed capacity of twelve beds, the present addition being the second additional unit added during the past five years. The hospital is now a general hospital, caring for all types of surgical and medical cases, with special arrangements for infants and children cases.

The hospital nursing staff is composed entirely of experienced graduate nurses, all of whom have been working together as a nursing unit for the past eight or ten years.

(Miss) Jonnie VanDevender, Secretary.

#### ADAMS COUNTY

Dr. H. M. Smith, who has been on the sick list for sometime, is now at the Crile Clinic in Cleveland where he has undergone an operation. Dr. E. E. Benoist recently returned from Cleveland where he spent a week at the Crile Clinic, to be with Dr. Smith at the time of his operation.

Lucien S. Gaudet, County Editor.

#### COAHOMA COUNTY

Among the doctors attending the meeting of the State Medical Association in Elloxi were Drs. A. G. Everett, Friars Point, Drs. E. LeRoy Wilkins, T. M. Dye, N. C. Knight of Clarksdale. It was reported that a most enjoyable and beneficial time was had by all. After the association closed, a two day fishing trip out into the Gulf of Mexico was participated in by Drs. T. M. Dye and E. LeRoy Wilkins of Clarksdale, Dr. Little of Oxford, Dr. Maxwell E. Lapham of Jackson, Dr. J. D. Biles of Sumner, Dr. J. G. Backstrom of Tutwiler, Dr. D. V. Galloway of Meridian and others, where a good time was had by all.

We regret very much that one of our outstanding members, Dr. T. G. Hughes, had an automobile accident a few days ago when the car that he was driving collided with the car of Mr. Alfred Altman of Indianola, on Highway 49, five miles south of Clarksdale. Dr. Hughes sustained a severe fracture of the left leg below the knee, severe scalp wounds, shock, and minor lacerations. Dr. Hughes is now in Campbell's Clinic, Memphis, where he is undergoing treatment. His condition in general at this time is fairly good, which we

are all glad to hear. The many friends of Dr. Hughes throughout the state will regret very much to know of this unfortunate accident and we all join together in extending him our deepest sympathies. Mr. Altman suffered a broken nose and minor injuries. Mr. Altman's five year old son who was in the car suffered a few minor lacerations and both he and Mr. Altman are getting along fine. Mrs. Altman, who was in the car with Mr. Altman, sustained several broken bones and internal injuries and died a few days after the accident. We all hope that Dr. Hughes will soon be well, and with us again. We miss him.

Dr. and Mrs. T. M. Dye have as their guests relatives from Atlanta.

Dr. N. Yeates of Lula recently visited the Sanatorium to consult with Dr. Boswell in the interest of one of his patients.

On May 3 the Coahoma County Health Department secured the full time services of a junior director by the addition to the family of the health officer, Dr. N. C. Knight, in the form of a fine baby boy. The mother, father, and son are all getting along nicely, we are glad to report.

On Monday, June 10, Dr. Lapham is scheduled to start his postgraduate course in obstetrics here. We are all looking forward to it with a great deal of anticipation and we all intend to take advantage of this wonderful opportunity, because we realize that such opportunities are rare indeed.

Dr. I. W. Barrett of Clarksdale is planning to attend the convention of the American Medical Association in Atlantic City in June. We all envy him this wonderful trip but wish him a happy and a profitable trip. After attending the convention Dr. Barrett will make an extensive trip throughout the North and East, returning to Clarksdale about the middle of July.

Dr. Curney, formerly of this city and now a resident of Oklahoma City, was a recent visitor in Clarksdale where his many friends welcomed and entertained him.

Dr. W. S. Slaughter of Jonestown, recently had as his guests his son and wife, Dr. and Mrs. W. L. Slaughter of Arkansas.

N. C. Knight, County Editor.

#### DESOTO COUNTY

The Biloxi meeting was indeed enjoyable from every viewpoint. Meeting friends, the program and the other features were all good. Dr. John Darrington's speech was exceptionally good.

We rejoice that the next meeting will be in Greenville on the Mississippi. Let us all lend a helping hand to our good president, J. R. Hill, in his efforts for 1935-36.

Drs. A. L. Emerson, A. J. Weissinger and ye editor attended the Biloxi convention from this county.

Is there any incongruity that the funeral directors had their annual meeting in Gulfport the same time the medical men convened?

We had the pleasure of renewing friendship with Dr. H. T. Ims of Vicksburg, the able and erudite editor of Warren County, whose articles are so well written and interesting each month.

The physicians of this county were invited by the Shelby county Board of Health to an obstetrical seminar; eleven of Memphis' leading physicians spoke on a subject pertaining to this line of work. These postgraduate courses are to be encouraged and of necessity, are of much value.

Dr. Lucien S. Gaudet's article in the last issue of this journal on socialized medicine contained pointed, pertinent facts concisely stated. I heartily agree with him. Anyone that failed to read this illuminating article should do so at once.

L. L. Minor, County Editor

#### JASPER COUNTY

Drs. W. C. Simmons and C. E. Burnham and families attended the meeting of the State Medical Association in Biloxi.

Dr. C. E. Burnham enjoyed a visit from his daughter, Mrs. Smith of Birmingham, Ala., recently.

A resolution of thanks was voted at the close of the lecture course which ended here Monday. Following the last lecture the Bay Springs Improvement Club gave a tea for the doctors after which Dr. Lapham addressed the ladies.

J. B. Thigpen, County Editor

#### LEFLORE COUNTY

The many friends of Dr. F. M. Sandifer, Jr. are pleased to know that he has a teaching fellowship with the Department of Surgery of the Louisiana State University Medical Center, Charity Hospital, of New Orleans, La., beginning the first of July, 1935. Dr. Sandifer was a recent visitor at his home in Greenwood.

Jack Hamilton, son of the late Dr. Hamilton, Greenwood, is a patient in the Greenwood Leflore Hospital, suffering with a compound comminuted fracture of left humerus, sustained in an automobile accident.

Dr. I. B. Bright, Greenwood, addressed the Northwest District Nurses' Association at Itta Bena, May 8, on "The Endocrine System."

Dr. and Mrs. H. T. Ashford, Clinton, visited in the home of Mrs. R. E. Denman, Greenwood, May 15.

Dr. and Mrs. A. F. Charlton, Berclair, have returned to their home after a ten days' visit with relatives in Nashville, Tenn.

Those attending the recent meeting of the Mississippi State Medical Association at Biloxi were Dr. and Mrs. J. C. Adams, Dr. and Mrs. L. B.

Otken, Dr. W. E. Denman, Dr. John A. Crawford, Dr. G. Y. Gillespie, Jr., Dr. and Mrs. R. B. Yates, Dr. and Mrs. L. A. Barnett, and daughter, Miss Nan of Greenwood, Drs. B. B. Harper and L. H. Hightower of Itta Bena, Dr. and Mrs. T. M. Riddell and son, Douglas, of Swiftown.

We are sorry to say that Mrs. J. P. Bates, wife of Dr. Bates, Greenwood, fell and fractured her hip, (surgical neck of left femur). She is a patient at the Greenwood Leflore hospital, and is doing as well as she could, in a plaster cast, this hot weather.

Dr. and Mrs. W. E. Denman and daughter, Miss Dot, attended the commencement exercises at Chamberlain Hunt Academy, Port Gibson, to see Jean Denman graduate May 30.

Mr. Carson Holloman, superintendent of schools, Batesville, son of Dr. T. B. and Mrs. Holloman, Itta Bena, will be married to Miss Sara King, daughter of Mr. and Mrs. Owen King, Jackson, on June 7.

W. B. Dickens, County Editor

#### MONROE COUNTY

Yes, of course, I went. It was a great meeting and a great meeting place. Beautiful, historic, intriguing old Biloxi! It is regrettable that so few Mississippians know and appreciate the beauty of our coastland. The entire waterfront of this peninsula that constitutes our seafont is of entrancing beauty and loveliness. In an automobile that was kindly loaned me by my splendid friend, Dr. Howell of Canton, I drove the full length of this peninsula in company with my good friend Dr. Seale Harris, one afternoon during my stay down there. All nature seemed at its best. Dr. Harris said, "Doctor, I have been privileged to travel a great deal, I have visited and seen practically all the beauty spots of the world, including the famed Bay of Naples, and I have seen nothing in all my travels that compares in beauty with this waterfront." How sad it is that there is no road over which one can drive in comfort to see this "gem by the sea."

Yes, it was a great meeting. There were papers read and discussed at that meeting that will go into medical history. There were matters considered that will have great bearing on medical economics of the state. I wonder why some doctors refuse to attend these meetings and do their honest share of the work so necessary for the good of the profession and the welfare of humanity? One hates to think of the ugly word "slacker" in connection with his brethren. Again it was a great meeting, to me, because of the many, many friends so dear to me, whom I met while there. How I did enjoy meeting them. It was so fine to meet Dr. Parker and his petite and charming wife. I

was so glad to see him well again after his serious illness of last year. Then there was good old D. J. Williams—just as staunch and busy and hard-headed as ever. May he live long and prosper. Backed and supported, as he always is, by his brilliant wife he can never go far wrong. Then there was our own brilliant and eloquent Dearman—it was good to meet him again. Dr. LeBaron, Dr. Carroll, Dr. Shehan and others of the coast were there to bid us welcome. It gave me great joy to see and talk, again, with my dear friend Dr. T. E. Ross, Sr. It is fine to know that his serious injury did not completely disable him. Dr. W. L. Little and his gracious wife—father and mother of our Dr. A. H. Little of the University—were there. How fond I am of them and how glad I was to see them again. God bless dear old John Darrington (and I must include in this wish his gracious wife)—they, too, were there. John, you may never know the joy and pleasure your words, privately spoken to me, brought to my heart. To be respected and loved by men like you is compensation for all the rebuffs and disappointments of life. I could never think of omitting from my list of friends whom I met, Dr. Charlie D. Mitchell, he of imposing mien—aristocrat of aristocrats in bearing—brilliant of mind and eloquent of tongue. Since young manhood, I have known and loved and trusted him. We were fellow-graduates. Charlie D., do you realize that but few of our crowd will ever grasp our hands again? Dr. J. W. D. Dicks was there. What a prince is he? No meeting would be complete without his presence. Underwood, the diplomat—cool, capable and stalwart, with his lovable, shrinking, sad-eyed wife were there. I always am glad to meet them. They have always been my friends, and I trust that they will always be. Henry Boswell and his very competent and gracious wife, could not be passed without notice—I was glad to meet them again. W. H. Frizell, of course, was there. May he never absent himself from our friendly gatherings. Tom Dye with his keen eye and contagious smile answered "here," when his name was called. We could not function without his presence. Percy Wall is, perhaps, the best presiding officer that any association has. Prompt in his decisions and fair and honest in his rulings. We shall miss him when he quits his "job" as he threatens to do. When this time comes, I wonder if he will not be asked to come up higher? Dr. John B. Howell and Mrs. Howell. How much I prize them and their friendship! They, too, were there. The boys from the Northeast Mississippi Thirteen Counties were there. They know that I love them all. I could not pass without mention our old and efficient secretary of this best of all societies, Jamie Acker. Though he has left us for a little season, we know that he will return to his first love. It was good to meet



him and his accomplished wife once again, then it was fine to greet and be greeted by all the members of the Auxiliary. I wonder if I may claim them all as my friends too? Time will not allow me to mention the many others who I hold most dear. But, my friends, I love you just the same.

With the joy of meeting all these there was sadness occasioned by the absence of others, some of whom I shall never meet again, since they have gone on. Then there are some who could not be with us in person that wished to be there. Among these I mention Dr. P. W. Rowland and Sydney Johnston. I hope that all the absent ones will meet us at Greenville next May when Drs. Hugh Gamble and Paul Gamble, and all the Greenville boys will receive us to their home town. There is one name that I have held in reserve. It may be the last that I shall mention, but by no means is he least in my esteem. It is our genial and tireless editor-in-chief, Dr. L. S. Lippincott, but simply "Lip" to his many friends. To me, what a glorious week it was.

Home again, at work again. My dog, at least, is glad that I am back. Amory, too, is fine. Beautiful trees—fine lawns—splendid citizens—peace and happiness. So it is, and life goes on, the same yesterday, today and forever.

Dr. W. C. Spencer, our one honorary member, is dead. He died last week. No other news of our group of "saints."

G. S. Bryan, County Editor

#### PEARL RIVER COUNTY

Nothing of much import from this county. Some of our physicians were so busy that they did not get to the State Medical Association meeting at Biloxi, even though it was so near. Others did go and considered their time profitably spent. We are faced every day by some of the problems brought up and discussed at the meeting of the State Hospital Association and the State Medical Association, and I am sure that more of our physicians could have attended these meetings had it not been that they were confronted with those problems and carrying an extra heavy and unprofitable burden due to them. Let us hope that conditions will be better before our next meeting.

We have had very little serious illnesses for some time which is fortunate for both the patient and the physician. Many who probably would be patients have nothing with which to pay for medical service or properly care for themselves during serious illness. Our birth rate exceeds our death rate by a ratio of more than three to one. Guess it will not be many years before this county will be rather densely settled. We hope that financial matters will pick up as markedly.

G. E. Godman

#### PONTOTOC COUNTY

Pontotoc County Medical Society met in my office, Tuesday, June 4, with 13 physicians present. We had Dr. J. C. Culley of Oxford for the out of the county speaker. He showed us the Rogers-Anderson well-leg splint with x-ray pictures of about seven cases treated with it with good results. By using this splint he states that he can get his fracture of the femur cases out of bed in three days. We are always glad to have Dr. Culley with us.

Dr. J. D. Neel of Ecru is reported on the sick list. We hope that he will soon be well again.

Dr. W. N. Whitfield of Jackson was a pleasant caller in our office June 6. Call again, Doctor! We are always glad to have you!

We attended a very interesting staff meeting at the Houston Hospital, May 31. Drs. Felix J. Underwood and H. C. Ricks were present and gave some very interesting talks.

Dr. W. P. Webster of the Western part of the county has recently moved to Lafayette county. His address is Oxford, R. 4.

We are glad to report that the son of Dr. O. F. Carr, Frank, is back home after undergoing a very serious operation in Memphis Baptist Hospital.

R. P. Donaldson, County Editor

#### TALLAHATCHIE COUNTY

Dr. D. G. Bardwell and Mrs. Bardwell attended the graduation of their daughter, Elizabeth, at Knoxville, Tenn.

Dr. J. E. Powell attended a Murphree Rally at Calhoun City, the former home of Dr. Powell.

Mrs. J. W. Moody spent last Thursday at Holly Springs in company with Mrs. Ned Rice of Charleston where they attended a District W. M. U. Meeting.

The writer, Drs. J. A. Biles of Sumner and J. G. Baxtrum of Tutwiler enjoyed a trip to Biloxi in attendance at the State Medical Association. The writer visited Mobile, Gulfport, and Poplarville while in South Mississippi.

Regardless of the much rain and cool weather the crops in this section are fairly good. Much planting was late but fairly good stands of cotton and corn are evident.

The Charleston Hospital has had a busy week as there seemed to be an epidemic of appendicitis. Many of the laymen attribute the increase of cases to the fact that blackberries are ripe.

J. W. Moody, County Editor

#### WARREN COUNTY

The Mississippi State Medical Association that recently convened at Biloxi, in its annual session for 1935, like unto all others that have gone before, now has become an historic event of the past. Though much history, political, scientific, social,



etc., may have been written, there seemed to be the spirit and letter of democracy prevailing thru out.

The scientific sections, that it was our privilege to attend, impressed us as being most excellent. The Gulf doctors said to us visitors, "Here is the wonderful gulf, take it and enjoy it, it ought to satisfy the most fastidious." Whatever else the doctors may have fastened upon as souvenirs we have not heard of any who brought away the gulf or a portion thereof.

The doctors from Vicksburg who attended the state meeting, or so we are advised, were Doctors J. A. K. Birchett, Jr., Guy C. Jarratt, Edley Jones, I. C. Knox, Leon S. Lippincott, S. G. Mounger, W. K. Purks, A. Street, and F. M. Smith. These went and returned.

We are advised that the Section on Eye, Ear, Nose and Throat held its session on a wonderfully equipped boat that put out to sea in order that members of the section might not see, hear or otherwise be diverted from the serious business that was before them. This strange argosy, so we are further informed, had hardly put well out from port ere someone observed Dr. Edley H. Jones standing on the shore "like a moral lighthouse in the midst of a dark and troubled sea," or like "a deaf and dumb man wondering what it was all about." He was heard to exclaim, "Roll on, thou deep and dark blue ocean—roll. *Ten thousand fleets sweep o'er thee in vain;* man marks the earth with ruin—his control stops with the sea."

Dr. Pierre Robert heard and heeded the call of "Carry Me Back to Old Virginia," so Friday, May 31, he started for Lexington, Virginia, to visit his sister who is the wife of Dr. F. Gaines, the present president of Washington and Lee University. Doctor and Mrs. Francis Gaines have kept this winter Dr. Robert's little daughter. Dr. Roberts accompanied by his wife will bring their daughter when they return after a few weeks' visit.

An announcement that came to our desk today is also an invitation that we appreciate very much, for we are invited to be present at the First Presbyterian Church, of our city, at high noon June 22, 1935, when Miss Mary Kemper and Dr. William Kendrick Purks, will make those solemn promises that will give them the right "To have and to hold from this day forward, for better, for worse, for richer, for poorer, in sickness and in health, to love and to cherish, till death do them part." Their many friends, both professional and lay, wish for them a lifelong happiness, these "whom gentler stars unite, and in one fate their hearts, their fortunes, and their beings blend."

Dr. Walter E. Johnston on June 6, went to Meridian to attend the meeting of the East Mississippi Medical Society. On this occasion he was the exchange essayist from the Issaquena-Sharkey-War-

ren Counties Medical Society and read a paper on "Practical Points in the Treatment of Fractures." The doctor reports a most interesting meeting and delightful trip. It has been rumored that the doctor made the trip to Meridian by boat. This, however, is an error, the trip was made by auto overland without mishap or "handicap."

Dr. Alston Callahan recently paid a short visit back home to see his mother and brothers of this city. The doctor graduated from Tulane University, Medical Department, in 1933. Following graduation he served an internship in the New Orleans Charity Hospital. Afterwards he was elected to the staff of the Eye, Ear, Nose and Throat Department of the hospital, thus greatly enlarging his opportunities for service and study. Dr. Callahan while on his visit here did some *real* eye, ear, nose and throat work in his brother's, Dr. Edley Johns' office. Dr. Edley was attending the Rotary International meeting in Mexico City, Mexico.

Dr. George M. Street, accompanied by his wife and daughters attended the meeting of the American Medical Association at Atlantic City.

H. T. Ims, County Editor

#### WASHINGTON COUNTY

Mr. Bunt Witte, son of Dr. K. L. Witte, Leland, was awarded the Rotary Club medal for scholarship, school spirit and unselfish service at his graduation from the Leland High School in May. Young Witte left on June 7 with Mr. John Winter and other friends for Lexington, Va., where he will make arrangements to enter the Virginia Military Institute, in the fall.

Among those who attended the horse show in Cleveland last month were Dr. K. L. Witte and Miss Virginia Witte of Leland.

Mrs. K. L. Witte of Leland entertained the members of the senior class of the Leland High School with a delightful buffet supper in honor of her son, Mr. Bunt Witte.

Mrs. T. L. Dobson of Leland visited friends in Memphis recently.

Dr. and Mrs. R. A. Haggard and Miss Virginia Houry of Arcola attended the horse show in Greenville which was held during the meeting of the Garden Club and which proved to be quite a social event.

Mrs. James Franklin of Jackson and little daughter Sharon are visiting her parents, Dr. and Mrs. T. B. Lewis of Greenville. Mrs. Franklin sang at the "Ladies Night" meeting of the Kiwanis Club. Mrs. Franklin who has a most beautiful voice and who has studied under some of the most renowned teachers, was much in demand during her stay in Greenville. She was soloist at the Methodist Church and sang at several different entertainments.

The friends of Dr. and Mrs. T. B. Lewis of Greenville will be interested to know that their daughter, Mrs. Rhea Blake and husband of Bluefield, W. Va., are in New York for a try out on the radio.

Dr. J. A. Beals of Greenville has gone to New York for a month's post graduate work at the Memorial Hospital. He will also attend the meeting of the American Medical Association in Atlantic City.

Dan Beals, bright little son of Dr. and Mrs. J. A. Beals of Greenville, is visiting his grandmother, Mrs. May Christian at Poplarville, Ind.

Dr. William Hickerson of the Sanatorium spent the week June 4-7, in the health department making chest examinations. Clinics were held in Greenville, Leland and Hollandale. Fifty-two tuberculosis suspects were referred in by physicians for examination.

Miss Mary Eubanks, the charming daughter of Dr. and Mrs. G. W. Eubanks, Greenville, attended the dance in Greenwood this past month.

Mr. and Mrs. Devere Dierkes of Hot Springs, Ark., and Mrs. Jean Jewell of St. Louis were visitors of Dr. and Mrs. D. C. Montgomery, Montbury, Greenville.

Mrs. D. C. Montgomery, Mrs. Frank Robertshaw, Mrs. Fred Norwood, all of Greenville, and Mrs. John Winter of Leland were guests of the Hollandale Flower show.

Numbered among the many lovely courtesies for Mrs. Lillian Garner of New York was the dinner given by Dr. and Mrs. Paul Gamble of Greenville, at their handsome home in Gamwyn Park. Seated at the table to enjoy the delicious menu was Mrs. Lillian Garner, Mr. and Mrs. W. L. Francis, Mr. and Mrs. C. W. Kittleman, Mr. and Mrs. C. P. Williams and Dr. and Mrs. Paul Gamble.

Dr. J. C. Pegues and Dr. Otis H. Beck of Greenville played in the Delta Inter-Club Golf Tournament in Yazoo City and Greenwood. Dr. Beck also played in the tournaments at Clarksdale and Greenville.

Dr. and Mrs. E. T. White of Greenville visited Dr. White's mother Mrs. J. A. Johnson of Merigold.

Dr. John Shackleford, county health officer, visited relatives in Carrollton having been called there on account of the illness of his father. His many friends are delighted to know that his father has completely recovered.

Dr. W. H. Sutherland and son of Booneville were recent visitors to Greenville.

Dr. and Mrs. R. E. Wilson, Greenville, attended the graduation exercises at M. S. C. W., Columbus. Mrs. Wilson's sister, Miss Margery Moore, was a member of the graduating class.

Dr. R. E. Wilson of Greenville visited his old home in Guntown recently.

Dr. and Mrs. C. P. Thompson, Greenville, attend-

ed the graduating exercises at "Ole Miss," their daughter Miss Dorothy being a member of the graduating class.

The following announcement will be of much interest to the friends of Dr. and Mrs. C. P. Thompson and the happy couple:

Dr. and Mrs. Chester P. Thompson announce the engagement of their daughter Dorothy to Mr. William Colbert Keady, the wedding to take place in July.

Miss Thompson attended Newcomb College in New Orleans and graduated recently from the University of Mississippi. She is a talented musician and possesses a lovely coloratura soprano voice. She is a member of the Phi Mu Sorority, Kappa Zeta Musical Fraternity and Cotillion Club of Greenville.

Mr. Keady, son of the late Mr. and Mrs. John Michael Keady, attended Washington University where he was an honor student. He has served as president of the Phi Eta Sigma, Y. M. C. A., Men's Council and Junior Class. He is also a member of the Phi Delta Phi legal fraternity.

The following Washington County doctors and their wives attended the Mississippi State Medical meeting in Biloxi. Dr. W. P. Shackleford, Hollandale, Drs. H. A. Gamble, P. G. Gamble, D. C. Montgomery, J. A. Archer, O. H. Beck, G. W. Eubanks and Dr. and Mrs. L. C. Davis and their daughter Ada Lee, all of Greenville.

Dr. H. A. Gamble of Greenville was elected president of the Mississippi State Hospital Association for 1936.

Dr. L. C. Davis and Dr. P. G. Gamble of Greenville were both on the program of the Mississippi State Medical Association meeting held in Biloxi.

Greenville and Washington County rejoice over the prospects of having the Mississippi State Medical Association meet in Greenville next year. This honor is one to be proud of and Greenville and Washington County will do everything possible to make the visit to Greenville an enjoyable one. Every doctor in Mississippi is invited and now is the time to start making your plans. We want every one of you to come—a cordial welcome awaits you.

John G. Archer, County Editor

#### WEBSTER COUNTY

Dr. S. K. Gore, Mantee, and the writer attended the meeting of the Mississippi State Medical Association at Biloxi.

Drs. J. H. Brown, J. D. Turner, W. H. Curry attended the staff meeting at Houston Hospital May 30. Dr. F. J. Underwood and Dr. H. C. Ricks were with us and Dr. Underwood gave us some very helpful information concerning the future practice of medicine.

Dr. W. A. Berryhill, Eupora, is back from a

month's vacation in Rio Grande Valley. He is looking much younger and feeling fine.

W. H. Curry, County Editor

#### WINSTON COUNTY

We regret to hear of Dr. C. A. Kirk's illness. He has been critically ill, and we hope he may soon be all right.

Dr. H. B. Watkins of Noxapater was in the city yesterday on business.

Dr. T. C. Suttle of Beth Eden neighborhood was in this week on business.

Dr. E. L. Richardson accompanied by his brother went to the Delta fishing last week. We are not informed as to their luck.

Dr. W. Parks recently traded in his car for a new one.

Quite a bit of malaria is existing around now. We hope an anti-malarial drive will be put on in some of the new set-ups.

We know but little of interest to report at this writing. Government conditions are so complicated and uncertain it would be a guess.

M. L. Montgomery, County Editor.

#### THE WOMAN'S AUXILIARY TO THE MISSISSIPPI STATE MEDICAL ASSOCIATION

President—Mrs. Leon S. Lippincott, Vicksburg

President-Elect—Mrs. Adna G. Wilde, Jackson

Secretary—Mrs. H. C. Ricks, Jackson

Treasurer—Mrs. J. W. D. Dicks, Natchez

Press and Publicity—Mrs. Hugh H. Johnston, Vicksburg.

The 12th Annual Executive Board Meeting of the Woman's Auxiliary to the Mississippi State Medical Association was held in the Sun Room of the Buena Vista Hotel, Biloxi, on the evening of May 13, 1935, 7:30 P. M., preceded by a banquet. Thirteen members were present.

The meeting was called to order by the state president, Mrs. Henry Boswell. Minutes of the meeting of May 8, 1934 were read by the secretary pro-tem, Mrs. Elmer Gay, and duly seconded, were approved.

Mrs. J. Bonar White, Atlanta, Ga., president of the Auxiliary to the Southern Medical Association, was introduced. Mrs. White gave a talk regarding the adoption of a "Doctors' Day" in the state of Georgia.

The report of the committee for the revision of the By-Laws and Constitution was read by Mrs. J. A. Beals, Greenville, and a motion prevailed that they be presented at the general meeting for adoption.

Mrs. D. J. Williams, Mrs. W. C. Pool, Mrs. J. W. D. Dicks, Mrs. H. P. Cockerham and Mrs. Harvey Garrison were elected by the board to serve as nominating committee.

Mrs. H. C. Ricks was appointed as chairman of the resolutions committee with Mrs. Little and Mrs. Stowers to serve with her.

Mrs. Leon S. Lippincott outlined a plan that might be executed to complete the \$5000.00 Preventorium Endowment Fund. The meeting adjourned.

#### GENERAL MEETING

The general business meeting of the 12th annual meeting of the Woman's Auxiliary to the Mississippi State Medical Association was called to order by the president, Mrs. Henry Boswell, at 2 P. M., May 14, 1935, in the Sun Room of the Buena Vista Hotel.

The invocation was offered by Dr. Ferguson of Biloxi.

Mayor O'Keefe, Biloxi, gave a very cordial welcome address and the response was made by Mrs. Augustus Street, Vicksburg.

Mrs. Boswell then introduced Mrs. J. Bonar White, president of the Auxiliary to the Southern Medical Association and the 3rd vice-president of the Auxiliary to the American Medical Association.

Mrs. Adna G. Wilde gave a report of the Southern convention at San Antonio.

Minutes of the 1934 meeting were read, also the minutes of the pre-convention board meeting. There being no objections, they were declared adopted.

The following auxiliary reports were read: Issaquena-Sharkey-Warren Counties—Mrs. Augustus Street, Vicksburg

Homochitto Valley—Mrs. W. K. Stowers, Natchez

Delta—Mrs. L. B. Otkin, Greenville

Tri-County—Mrs. W. L. Little, Wesson

Central—Mrs. H. C. Ricks, Jackson

Simpson County—Mrs. John B. Howell, Canton

Harrison-Stone-Hancock Counties—Mrs. Elmer Gay, Gulfport

Biloxi Unit—Mrs. J. T. Weeks, Biloxi

South Mississippi—Mrs. W. W. Crawford, Hattiesburg.

Upon motion these were received and filed.

Reports of Councilors were read as follows:

1st District—Mrs. John Beals, Greenville

5th District—Mrs. John B. Howell, Canton

8th District—Mrs. W. H. Frizell, Brookhaven

9th District—Mrs. E. C. Parker, Gulfport

Upon motion these were received and filed.

The report of Mrs. L. S. Lippincott, president-elect, chairman of organization, was read.

The report of Mrs. Hugh H. Johnston, 3rd vice-president, chairman of press and publicity and report of Mrs. J. W. D. Dicks, historian, were read, accepted and filed.

Treasurer's report, read by Mrs. Hightower, Hattiesburg, as follows:

Balance on hand May, 1934 .....	\$ 83.73
Receipts .....	115.50
Total .....	199.23
Disbursements .....	107.44
Balance .....	\$ 91.79
Cash from 2 members from Gulfport at Biloxi .....	1.00
Total .....	\$ 92.79

The president announced the following committees: Resolutions, Mrs. H. C. Ricks, Mrs. W. K. Stowers, Mrs. W. L. Little; Courtesy, Mrs. W. W. Crawford, Mrs. W. H. Frizell, Mrs. A. Street. The chair entertained a motion and the meeting was adjourned.

## SECOND DAY, GENERAL MEETING

The second general meeting of the Woman's Auxiliary to the Mississippi State Medical Association was called to order by the president, Mrs. Boswell, in the Sun Room, Buena Vista Hotel, Biloxi, 8:30, Wednesday morning, May 15.

Invocation was offered by Dr. Hodge, Biloxi.

Mrs. John Beals read the report of the Constitution Revision Committee as approved by the Executive Board. She moved that the constitution be adopted as amended, this was seconded by Mrs. Harvey Garrison, and adopted by the convention.

Mrs. W. C. Pool, chairman of the public relations committee, made her report. Those winning prizes in the essay contest were as follows: 1st prize, Harriet Camp, 2nd prize, Helen Lum, honorable mention, Gordin Ewing, Biloxi. The report was accepted with a rising vote of thanks. A motion for the continuance of the essay contests was made and adopted for another year.

Dr. E. C. Parker, president of the State Medical Association and Dr. J. R. Hill, president-elect, were introduced by Mrs. Boswell. They expressed appreciation of the Auxiliary, and both offered co-operation. Mrs. J. Bonar White gave a very inspiring address on "The Romance of Medicine and Knowing Your Auxiliary."

A report on the Jane Todd Crawford Memorial was made by Mrs. L. L. Polk. Mrs. H. C. Ricks, chairman of the resolutions Committee, made a report recommending the adoption of "Doctors' Day", for annual observance by the Auxiliary. The resolution was adopted by the convention. Mrs. Ricks then read a resolution of regret at the death of Mrs. Bessie Nugent Shands, which was adopted. The Convention stood in expression of esteem.

Motions were made that letters of sympathy be sent to Mrs. Sydney W. Johnston and Mrs. Collins

whose absence was caused by serious illness in their families.

The report of the courtesy committee was read by Mrs. W. W. Crawford, chairman, and adopted by the convention.

The report of the nominating committee was made by Mrs. Dan J. Williams. Nominations from the floor were called for, but no further nominations being made, the following were elected by acclamation:

President,—Mrs. Leon S. Lippincott, Vicksburg.  
President-Elect,—Mrs. Adna G. Wilde, Jackson,  
1st Vice-President,—Mrs. L. S. Gaudet, Natchez  
2nd Vice-President,—Mrs. L. B. Otkin, Greenwood.

3rd Vice-President,—Mrs. Hugh H. Johnston, Vicksburg.

4th Vice-President, Mrs. E. C. Parker, Gulfport.  
Recording Secretary, Mrs. H. C. Ricks, Jackson,  
Treasurer,—Mrs. J. W. Dicks, Natchez  
Historian,—Mrs. Harvey Garrison, Jackson  
Parliamentarian,—Mrs. D. J. Williams, Gulfport.  
Chairman, Public Relations, Mrs. W. C. Pool, Cary.

Preventorium Fund,—Mrs. Henry Boswell, Sanatorium.

## COUNCILLORS:

1st District, Mrs. John A. Beals, Greenville,  
2nd District—To be appointed  
3rd District—Mrs. W. H. Anderson, Booneville  
4th District—To be appointed,  
5th District—Mrs. John B. Howell, Canton  
6th District—Mrs. Lowry Rush, Meridian  
7th District—Mrs. L. L. Polk, Purvis  
8th District—Mrs. H. R. Fairfax, Brookhaven  
9th District—Mrs. Elmer Gay, Gulfport.

Mrs. Boswell made her report and the convention extended a rising vote of thanks for the splendid work of the president and other officers.

Mrs. Boswell then turned the gavel over to Mrs. Leon S. Lippincott who made a short address and outlined a plan for finishing up the Preventorium Endowment Fund.

The meeting was adjourned sine die at 11 A. M.

Mrs. Adna G. Wilde, Recording Secretary  
Mrs. Henry Boswell, President.

## SOCIAL AFFAIRS

On Tuesday noon the Biloxi unit of the Woman's Auxiliary to the Harrison-Stone-Hancock Counties Medical Society arranged for a lovely luncheon which was held in the main dining room of the Hotel Biloxi, and was enjoyed by all attending. At this time the officers of the Auxiliary to the Southern Medical Association were introduced. The president, Mrs. J. Bonar White, Atlanta, Ga., was introduced by Mrs. Henry Boswell, who in turn introduced the officers who were present. Mrs.



Dan J. Williams then introduced the officers of the Mississippi Auxiliary.

Wednesday at 12:30 P. M., Mrs. Dan J. Williams entertained with a luncheon in her own lovely home, Gulfport, in honor of Mrs. J. Bonar White, the past presidents, and president-elect. This affair was very much appreciated by those who were present.

Wednesday, 4:00 P. M., the Biloxi Unit was hosted at a tea given for the visiting ladies at the Veterans' Home, Biloxi.

#### PRESIDENT'S REPORT

Sent out 300 letters to the Federated Clubs and 130 letters to the Eastern Star Chapters regarding the Preventorium Fund; 125 personal letters to officers and auxiliary presidents.

Visited three auxiliaries.

Made a talk on Preventorium to one P. T. A.

Mimeographed revised constitution and sent copies to each member of the Executive Board and each auxiliary president.

Mrs. Henry Boswell, President

#### REPORT OF PUBLIC RELATIONS CHAIRMAN

Wrote to each auxiliary president and councilor in regard to essay contest. The replies were very few. Wish to thank all, especially Mrs. E. C. Parker and Mrs. John B. Howell, two councilors, for their splendid cooperation and the Homochitto Valley Auxiliary, The Issaquena-Sharkey-Warren Counties Auxiliary and the Delta Auxiliary for their work in getting the contest into the schools of their respective counties. Distributed 350 Preventorium pamphlets and 300 "Thistles and Tuberculosis" leaflets as material for the essays. Submitted 8 essays to the following judges: 1. Dr. G. S. Bryan, Amory, to judge from a general practitioner's viewpoint; 2. Dr. F. M. Smith, Vicksburg, to judge from a Public Health value; 3. Prof. W. M. Kethey, president of the Delta State Teachers College, Cleveland, to judge from a teacher's viewpoint. The decisions will be opened in the presence of the president and secretary of the Woman's Auxiliary, when the cash prize of 5 dollars will be awarded to the winner, or winners.

Mrs. W. C. Pool, Cary.

#### REPORT OF PRESS AND PUBLICITY CHAIRMAN

1. There are nine auxiliaries in the state. Four of these have units. Six of these have Press and Publicity Chairmen.

2. Early in the year I sent to the different chairmen a list of their duties. In the auxiliaries which do not have publicity chairmen, I have corresponded with the president or secretary, and

they have been a great help in getting news for the Journal.

3. As for space given us monthly in our official organ, the New Orleans Medical and Surgical Journal, we have all the space we want or need.

4. I have had at least one article from almost every auxiliary in the state. I have also had clippings from the Leflore County Unit of the Auxiliary to the Delta Medical Society; three articles from the Humphreys County Unit, Delta; one article from the Auxiliary to the Winona District Medical Society; fourteen articles and 41 clippings from the Auxiliary to the Issaquena-Sharkey-Warren Counties Medical Society; four articles and one clipping from the Auxiliary to the South Mississippi Medical Society; four articles and five clippings from the Auxiliary to the Harrison-Stone-Hancock Counties Medical Society; five articles and one clipping from the Auxiliary to the Homochitto Valley Medical Society; two articles from the Auxiliary to the East Mississippi Medical Society; one article from the Biloxi Unit of the Auxiliary to the Harrison-Stone-Hancock Counties Medical Society.

Besides these articles and clippings which have been published in the New Orleans Medical and Surgical Journal, I have had other news in the Journal consisting of one from the National Press and Publicity Chairman; one message, from our state president, Mrs. Henry Boswell; sanatorium notes; one picture with biography of our president; reports of the state convention last May in Natchez; and a program of the convention to be held in Biloxi.

5. The Journal has been sent each month for the past two years to the President and Press and Publicity Chairman of the Woman's Auxiliary to the American Medical Association, complimentary, through the authorization of the Journal committee.

Mrs. Hugh H. Johnston,  
Vicksburg.

#### REPORT OF CHAIRMAN OF PREVENTORIUM ENDOWMENT FUND

Balance on hand May 1, 1934 .....	\$217.07
Contributions collected .....	261.40
Total .....	\$478.47
Expenses for sending of letters and the use of some of the money for the children....	85.92
Total .....	\$392.55

Mrs. Dan J. Williams,  
Gulfport

#### REPORT OF COURTESY COMMITTEE

1. Resolved: that the Woman's Auxiliary to the Mississippi State Medical Association in our 12th annual convention, wishes to express its thanks for the gracious hospitality and courteous attentions of the Biloxi doctors and their wives,

the local hotels, and the press and all who have contributed so generously to the comfort and pleasure of this occasion.

The historical background, the natural beauty, and the recreational advantages of your city, have proven a charming atmosphere and an ideal location for such a gathering.

#### II. A RESOLUTION IN MEMORIAM:

Whereas: God in his infinite wisdom did on September 9, 1934, remove from her earthly ministrations our beloved member and co-worker, Mrs. Bessie Nugent Shands, and whereas, we shall miss her wise council and loving Christian personality, therefore:

Be it resolved by the Woman's Auxiliary to the Mississippi State Medical Association in regular session May 15, 1935 that we keenly feel the loss of her influence in keeping up the high ideals of our Auxiliary and be it further Resolved that these resolutions be spread upon the minutes of this organization and a copy be forwarded to the family of our departed friend.

#### III. A RESOLUTION:

Whereas, we are well informed about the histories of soldiers, sailors, kings and statesmen, inventors, discoverers, saints and craftsmen, who have shaped and directed our destinies, but omit the accomplishments of the medical profession in its struggles at an unwearied pace, unknown and unsung, to make human life safer and happier;

Whereas, these pursuers of truth, the practitioners of medical arts, have been the real force in developing our civilization, and

Whereas, they have made vivid, valiant struggles and sacrifices for the defense of the human race, therefore,

Be it resolved by the Woman's Auxiliary to the Mississippi State Medical Association in regular session, May 15, that (date to be set) be adopted as "Doctors' Day", the object to be the promotion of the well being and to honor the profession, both living and dead, and to study and commemorate their efforts in the promotion of health and happiness throughout the ages; the observance demanding some act of kindness and tribute.

#### IV. REPORT OF CONSTITUTION REVISION COMMITTEE.

Whereas this committee was appointed to rearrange and systematize a constitution already adopted and in use, the committee wishes to make clear several points before it proceeds with its recommendations.

It was found last year that certain phases of the work of this Auxiliary were not covered by the constitution. It was found that the present constitution was an involved one, difficult to amend because it incorporated all matter usually divided into a constitution and by-laws. It was further

realized that the organization is of a size and nature making it advisable to re-create its constitution in adherence to a form dictated by paragraph 49 of Robert's Rules of Order (Pp 156-157, notes p. 159).

The committee wishes to state that no change in the original sense of the constitution has been made. Some slight changes in wording and additions to clear the sense of certain sections have been made. These the committee makes note of in the recommendations.

#### COUNCILOR'S REPORT

FIRST District—Mrs. John A. Beals.

The first councilor district remains divided into two medical societies: (1) Clarksdale and Six Counties Medical Society, embracing Coahoma, Tunica, Quitman and Tallahatchie Counties, and a portion of Bolivar; (2) Delta Medical Society, embracing Bolivar, Washington, Sunflower, Humphreys and Leflore counties.

There are in the area of Clarksdale and Six Counties, 57 wives of physicians eligible to the auxiliary.

Attempts by correspondence to re-establish an organized auxiliary have met with no response from either former members or eligibles to membership.

The Woman's Auxiliary to the Delta Medical Society enters its third year with a membership of 26. There are 92 wives of physicians in this area eligible to membership. This Auxiliary holds regular semi-annual meetings with programs consisting of an address by a guest speaker and a short business meeting. Members and visitors are entertained following the meeting with teas which have furthered our acquaintanceship and added to our pleasure in attending the meetings.

The evening entertainment is held jointly with the Delta Medical Society. The average attendance at all entertainments has been 50.

Letters written by councilor..... 25

Phone calls made..... 10

All meetings of Delta Auxiliary attended.

No visits made to Clarksdale and Six Counties area.

It has been previously reported by the president of the Delta Auxiliary that two counties have organized working county units. Leflore and Humphreys. These county units have jointly raised \$62.50 for the Preventorium Fund. Humphreys county unit reports \$90.00 raised toward building cottages for the treatment of tuberculous patients in that county. Leflore County unit sponsored the Essay Contest, State Auxiliary project for 1935.

Fifth District—Mrs. John B. Howell.

The active counties in the 5th district are as follows: Claiborne, Hinds, Issaquena, Rankin, Scott, Sharkey, Simpson, Warren and Yazoo, numbering 10.

There are two auxiliaries: Issaquena-Sharkey-Warren Counties Auxiliary, and the Auxiliary to the Central Medical Society.

Simpson county is a unit of the Central Auxiliary.

The 5th councilor district has a membership of 82, having gained 17 members and lost 3. Three have moved from Sanatorium. Mrs. W. H. Watson is a member at large.

Yazoo county has been more active this year, and we have prospects of enlisting at least three new members for next year. There are three eligible in Rankin county but they are too far from an auxiliary to attend the meetings and are not interested for this reason.

I had the honor of attending Guest Day of the Issaquena-Sharkey-Warren Counties Auxiliary and shall always remember it with the greatest pleasure. A luncheon at noon, a lovely reception in the afternoon in the home of Dr. and Mrs. F. M. Smith. In the evening the officers and out of town guests were entertained at a banquet with the Medical Society, after which the ladies enjoyed a delightful theatre party given by Mesdames Pool and Lippincott. Another enjoyable event was a banquet given for the entertainment of the members of the Central Medical Society.

With Mrs. Pettit as president of the Issaquena-Sharkey-Warren Counties Auxiliary, Mrs. H. C. Ricks as president of the Central Medical Auxiliary, and Mrs. E. L. Walker president of the Simpson County Unit to the Central Auxiliary, it has been a pleasure to serve and it is with pride that I present a record of the accomplish-

ments of the auxiliaries in the 5th district. Eighth District—Mrs. H. R. Fairfax.

The 8th district of the Woman's Auxiliary has at present 25 members. The Homochitto Valley and the Tri-County Auxiliaries have been quite active. Both have made donations to the Preventorium Fund, and have sponsored the Essay Contest in the public schools.

Unfortunately the Pike County Auxiliary has been inactive this year, but I believe another year will find it functioning again, all the better to make up for lost time.

Report of 9th District—Mrs. E. C. Parker.

The 9th district is composed of Jackson, Harrison, Stone and Hancock counties.

I have been unsuccessful in organizing an auxiliary in Jackson county owing to the very small number of doctors' wives and the great distance they would have to go to attend meetings.

The Auxiliary to the Harrison-Stone-Hancock Counties Medical Society, however, has been quite an active auxiliary, with 28 paid up members, including the Biloxi unit. The meetings are held every month and are usually well attended.

The Essay Contest for the State Preventorium seems to have aroused quite a lot of interest. With the help of the county superintendents of education the contest was put on in each county, and the children were eager to enter. Some schools even purchased additional material for their library. It has been suggested to me by Mr. Deen, Harrison County Superintendent of education, that we repeat the contest in the fall term in our local schools.

## BOOK REVIEWS

*How to Practice Medicine:* By Henry W. Kemp, M. D. New York. Paul B. Hoeber, Inc., 1935. pp. 156. Price \$2.50.

This book is, as anyone who has read it must necessarily agree, very general. It contains advice that is indeed very excellent, touches deftly all angles and phases of the problems confronting the physician, and is written in a very amusing style; however, I will say, there are many suggestions and counsels offered that cannot be infallibly followed, which is natural, since there is absolutely no rule to which exceptions are not admitted. It would surely be an ideal way in which to practice medicine, if the physician were able to handle the situations presented by the author in the manner he suggests. Altogether, it is very well written, and I think it might be read with profit by all concerned.

SAM HOBSON, M. D.

*The Nervous Patient:* A Frontier of Internal Medicine. By Charles Phillips Emerson, M. D. Philadelphia. J. B. Lippincott Co., 1935. pp. 443. Price \$4.00.

Behold a thesis which deals with the "Nervous Patient," written by an internist and intended primarily for the general practitioner. It is rare indeed to find a professor of medicine interested in diseases that are non-structural in their pathology. Therefore, this volume fills a crying need, and is very well worth reading by every doctor of medicine. The mechanisms of functional disturbances are dealt with in a comprehensive way, and the scientific background for the explanations given is, on a whole, applicable.

The book, comprising about four hundred and fifty pages, is written in a manner which makes easy reading. A number of typographical errors which must be excused and some sentences poorly



constructed, detract but little from the worth of the book.

It would be difficult to review the many subjects discussed by Dr. Emerson, for he has touched upon practically all fields of medicine, pointing out symptoms in each which are due to what are usually called "functional disorders." Thus, the endocrine organs, the emotions, conditioned reflexes, allergy, disorders of the eye, sinuses, ears, teeth, heart, and digestive tract, are all discussed and shown to be responsible for nervous symptoms. The psychoneuroses are presented in a satisfactory way, while the major psychoses are briefly described.

I wish every medical man, student as well as practitioner, could read this book. I am convinced much benefit to the patients and doctors would be the reward. It is refreshing and stimulating to review a work of this kind, where the general practitioner is informed by an internist about disturbances that have no organic basis.

C. S. HOLBROOK, M. D.

*Blood Groups and Blood Transfusion:* By Alexander S. Wiener, A. B., M. D. Springfield, Illinois. Charles C. Thomas, 1934. pp. 220. Price \$4.00.

It is indeed regrettable that the section devoted to blood transfusion in this book does not approach the high standard of the excellent compilation of the present-day knowledge of blood groups. The striking contrast between the thorough, detailed, and masterly dissertation on blood groups and the incomplete, and almost perfunctory, exposition of blood transfusion obviously reveals the author's conspicuous interest in the former. The overwhelming prominence and importance given blood groups is more clearly demonstrated by the allotted space and wordage. Fourteen of the total 18 chapters and 167 of the total 208 pages are concerned with blood groups. The author introduces the discussion of the blood groups with an elucidative, but succinct, chapter concerning the fundamental principles of genetics and biometrics. He then gives a complete and detailed disquisition upon the heredity of blood groups, the anthropological investigations, and the medicolegal applications. The chapters devoted to blood transfusion are entirely too brief and incomplete. However, the book is a timely, authentic, and valuable survey of blood groups, which should be added to the increasing reference reading list.

MICHAEL DEBAKEY, M. D.

*Corrective Rhinoplastic Surgery:* By Joseph Safian, M. D. New York. Paul B. Hoeber, 1935. pp. 218.

Doctor Safian's monograph on corrective rhinoplastic surgery gives a comprehensive survey of

the problems of this specialized field. An introduction is included which gives an interesting history of the development of rhinoplastic procedures. The author goes into considerable detail in considering all the major deformities requiring rhinoplastic operations and clearly analyzes the procedures, the rationale of selection, and the results one may expect from their application. The extensive illustrations serve to clarify many of the more complicated operations. This book will be a valuable aid to one interested in rhinoplastic surgery.

NEAL OWENS, M. D.

*Sculpture in the Living: Rebuilding the Face and Form by Plastic Surgery.* By Jacques W. Mallniak, M. D. New York. The Lancet Press, 1934. pp. 203. Price \$3.00.

This work covers the field of plastic surgery in an unpretentious manner. The author makes no effort to go deeply into the technic of the various operations, but rather elects to tell in an interesting manner the indications and possibilities of accepted procedures. The book is adequately illustrated to make its contents clearly understandable. It should be a valuable aid to the general surgeon, the practitioner, and the social service worker interested in knowing some of the more important problems involved in plastic surgery, as well as becoming more familiar with many of the underlying psychological problems found in patients having abnormalities as a background for their complaints. The book is of distinct educational value.

NEAL OWENS, M. D.

*Doctors and Juries: The Essentials of Medical Jurisprudence.* By Humphreys Springstun. Philadelphia. P. Elakiston's Son & Co., 1935. pp. 155. Price \$2.00.

The following lines from the introduction of this volume bespeaks the necessity of the presence of such a handy medico-literary office assistant: "The average doctor has little knowledge of legal phraseology and neither time nor inclination to learn more about it. Lawyers may know a few medical terms, but they neither speak nor understand its language. The lay public is impatient of either jargon." With these introductory lines, the companionship volume, as edited by Humphreys Springstun, with an introduction by William J. Stapleton, Jr., M. D., L. L. B., is presented for review, consisting of twenty-eight chapters, intelligently composed and worded, in sequence, with chronological data, making for itself a valuable companion for the physician whose apprehensions and timorousness spontaneously are aroused whenever he is summoned to court. The contents are easily readable and understandable, and void of circumstantiality and circumlocutability. The type,



binding and finished product are only such as Blakiston & Company present from their bindery.

A valuable asset in collateral reading for physicians and lawyers.

WALTER J. OTIS, M. D.

*The Doctor in History:* By Howard W. Haggard.  
New Haven. Yale University Press, 1934. pp.  
399. Illus. Price \$3.75.

While this book is intended chiefly for the laity, it should have a place in every doctor's library, for it is a departure from the usual tedious chronological arrangements of a history of medicine. The epochs in medicine are unusually well arranged, and I know of no book in which one will find the gradual development of "Medicine" described to such advantage. It should receive prompt and cordial receptions from the profession and the laity. It is delightfully written, and well illustrated.

C. JEFF MILLER, M. D.

*Failure of the Circulation:* By Tinsley Randolph Harrison, M. D. Baltimore. Williams & Wilkins Co., 1935. pp. 396. Price \$4.50.

This book contains thirty-five chapters, many tables and figures. The term "hypokinetic syndrome" is employed in a generic sense as embracing all the various forms of acute circulatory failure, regardless of their causes. He uses the phrases hyperkinetic syndrome and hyperkinetic circulatory disturbance referring to clinical instances in which the physiological subjective and objective phenomena of circulatory activity appear in an exaggerated form. He gives the name "dyskinetic syndrome" to those disorders which are either associated with congestive heart failure or are likely to lead to it.

The first three sections of the book are devoted to the discussion of heart failure under these three headings. In section four he discusses the mixed types of circulatory failure and section five to the failure of the coronary circulation.

There are many good points mentioned throughout the book and many worthwhile remembering. On page 260 the author says, "The blood pressure may be high, low or normal in patients with congestive failure. Improvement may be associated with an increase, a decrease or no change in either the systolic or diastolic pressure." We may say then that blood pressure in patients with congestive failure is dependent on several factors and changes occur according to physiological mechanism that predominates in any particular case.

He states in another part of the book that dyspnea in an edema-free patient is likely to be a more serious symptom than in a water-logged in-

dividual, because in the latter subject proper diuretic measures will usually have a very beneficial result on the dyspnea. This may or may not be true as individual patients vary in their response to treatment.

The statement that the patient who has once needed digitalis will in most cases always need it, and that ordinarily the drug should be administered for the remainder of his life, should be remembered.

This book may be recommended to those interested in the circulation.

J. M. BAMBER, M. D.

*The Romance of Exploration and Emergency First-Aid from Stanley to Bryd:* By Burroughs Wellcome & Co. New York. Author, 1934. pp. 160.

This delightful small book deals with heroes of exploration. It is in reality an advertising booklet stressing the great importance of the concern's medicine chests and first-aid kits in the armamentarium of the explorers. The only reason for the review of this book is the many historical facts and interesting pictures to be found in its pages.

I. I. ROBBINS, M. D.

#### PUBLICATIONS RECEIVED

Amadee Legrand, Editeur, 93, Blvd., Saint-Germain, Paris: *Recherches Anthropométriques sur La Croissance des Diverses Parties du Corps*. 2nd Ed., by Dr. Paul Godin.

C. V. Mosby Company, St. Louis: *Management of Fractures, Dislocations and Sprains*, by John A. Key, E. S., M. D. and H. Earle Conwell, M. D., F. A. C. S. *Clinical Laboratory Methods and Diagnosis*, by R. B. H. Gradwohl, M. D.

Macmillan Company, New York: *Objective and Experimental Psychiatry*, by D. Ewen Cameron, M. B., Ch. B., D. P. M.

Yale University Press, New Haven: *A Bibliography of the Poem Syphilis Sive Morbus* by Girolamo Fracastoro of Verona, by Leona Baumgartner and John F. Fulton.

Williams & Wilkins Company, Baltimore: *The Woman Asks the Doctor*, by Emile Novak, M. D.

Columbia University Press, New York: *Emotions and Bodily Changes*, by H. Flanders Dunbar.

William Wood & Company, Baltimore: *Handbook of Anesthetics*, by J. Stuart Ross, M. B., Ch. B., F. R. C. S. E. and H. P. Fairlie, M. D.

J. B. Lippincott Company, Philadelphia: *International Clinics, Volume II. Forty-fifth Series*, June 1935, Edited by Louis Hamman, M. D.

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## TREATMENT OF SOME VASCULAR DISTURBANCES OF THE EXTREMITIES\*

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NEW ORLEANS

When histories of patients are reviewed several things are apparent.

1. Many of these patients apply for treatment early enough to avoid serious consequences.

2. In some cases the complaints of patients are considered in an indifferent manner, and arch supports for supposed, though non-existent, flat feet are ordered. This statement is borne out by the fact that in four cases, which I have had occasion to observe recently, the original diagnosis made, according to the patient's statements, was painful flat feet for which arches had been ordered, and in one instance the patient had been advised to have a stabilizing operation done for a traumatic arthritis.

3. In all too few cases the extremities are examined with the same meticulous care that characterizes our attitude toward vague abdominal pain.

During the past twenty five years many have devoted great efforts to developing methods of examination of the extremities and to establishing criteria by which the circulatory sufficiency can be estimated, as well as means of increasing collateral circulation where the integrity of the part is threatened.

Failure to carefully examine patients and

failure to utilize established criteria make it necessarily impossible to arrive at an approximate diagnosis. The utilization of methods ill adapted to the condition in question leads to disappointments and condemnation of methods. The failures are often our own fault.

We have come to speak of peripheral vascular disease. In reality the conditions ordinarily discussed under this title are peripheral disturbances of vascular origin.

It is important that this distinction should be understood. The fundamental factor of importance is that manifestations of nutritional disturbances, such as acrocyanosis, claudication and gangrene, are local evidences of a general disease. All measures which attempt to cure a symptom or manifestation which is local in character are basically wrong from a physiological standpoint.

Developments in the treatment of occlusive vascular phenomena, whether spastic or obliterative in character, have followed many leads, some physiologic, others as by-products of increased knowledge of the sympathetic system.

Many steps in the development of useful procedures were discarded as soon as practical end results proved that the hopes of the early enthusiasts were neither justifiable nor well founded.

Before discussing the treatment of diseases which give rise to nutritional disturbances of the extremities let us review a few facts about the more common diseases in question—arteriosclerosis, diabetes, Buerger's disease and Raynaud's disease.

### Arteriosclerosis:

1. As a rule it is found in patients past middle life.

\*Read before the Orleans Parish Medical Society, March 11, 1935.

†From the Department of Surgery, Graduate School of Medicine, Tulane University.

2. Trophic disturbance may be present.
3. The pulse may be absent in some of the larger vessels.

4. Claudication.

5. Pain is relieved by heat.  
Thrombo-angiitis obliterans:

1. As a rule young people.

2. Race—Buerger states that it is most commonly found among Russian Jews. This has not been our experience as we have seen it in almost all racial and national groups except the pure negro. I believe there are some cases reported even among the pure negro.

3. Absence of pulsation in the vessels of the extremities. This is not an early manifestation.

4. Intermittant claudication.

5. Recurrent migrating thrombo-phlebitis.

6. The disease is slowly progressive.

7. Trophic disturbances develop.

8. Pain is the outstanding disabling factor.  
Raynaud's Disease:

1. Usually occurs in young people.

2. It is found in men as well as in women.

3. Often follows psychic shock.

4. Presence of pulse in the vessels of the periphery.

5. The skin presents a marbling appearance.

6. Claudication.

7. There are trophic disturbances not only in the superficial tissues but in the terminal phalanges.

Thrombosis:

1. Rapid in onset.

2. Proceeds to moist gangrene.

3. Absence of pulsation.

4. Trophic disturbances.

Erythromelalgia-Weir Mitchel's Disease:

1. Persistent pain in the dependent position.

2. Pain relieved by elevation.

3. Pain increased by heat or exertion.

4. Redness persists in elevated position.

5. Bounding pulse.

6. Manifestations are bilateral.

7. No claudication.

8. No trophic disturbances.

9. No thrombo-phlebitis.

In the first place each of the diseases men-

tioned is general in character. The peripheral manifestations are only local evidence of general circulatory disturbances.

Cases which are to be considered in this review belong to several groups:

Group 1. Sudden interference with circulation.

In this group we place injuries to large vessels which necessitate ligation and those cases in which a sudden obliteration is due to an embolus.

Group 2. Slowly progressive obliterative diseases, such as arteriosclerosis, diabetes and Buerger's disease.

Group 3. Vasomotor disturbances such as Raynaud's disease, and Weir Mitchel's disease.

Differential diagnosis to determine the cause of pain in the extremities necessitates careful physical examination and the utilization of tests to determine collateral circulation, the condition of the arteries, that is whether the changes are due to vasospasm or to actual narrowing, and the condition of the peripheral circulation.

Only a few years ago it was necessary to say that in many instances the diagnosis of Buerger's disease was only suspected when it was too late for conservative measures. A simple clinical examination which includes the general appearance of the extremity in the horizontal, elevated and dependent positions affords much valuable information.

Recent developments in our knowledge with reference to the control of circulation and its efficiency both in the main vessels and collaterals has brought forth many new tests. We must not, in our enthusiasm for the new, pass over, unused, the obvious and older tried and proven methods. Among these we must mention the importance of inspection of the limb in various positions. Ischemia, redness or cyanosis is of the greatest importance. Buerger speaks of the "angle of the circulatory sufficiency" by which is meant that a limb elevated to 180 degrees retains most of its color; when circulation is defective variable degrees of blanching occur. If the leg is gradually depressed, the angle at which the red hue returns will be found to vary considerably.

Particular attention should be directed to the presence or absence of pulsation in the *doralis pedis* and posterior tibial arteries. Tests of the collateral circulation, as suggested by Matas and Moschowitz, should be tried in some cases.

It is urgently necessary to determine whether the circulatory disturbance is spastic or obliterative, not only from the standpoint of ultimate treatment which will be either conservative or radical, but also for the relief of pain by various methods. Here we are called upon at times to utilize spinal anesthesia, paravertebral block and intravenous protein therapy for differential diagnosis.

#### TESTS TO DETERMINE WHETHER THE CIRCULATORY DISTURBANCES IS DUE TO VASOMOTOR DISTURBANCES OR ORGANIC DISEASE

Scott and Morton have determined that "general anesthesia produced by nitrous oxide, oxygen, reinforced for relaxation with ether, caused fully as complete vaso-dilatation to the normal level as that which followed spinal anesthesia." They state, "At least under certain conditions it is simpler to induce a short inhalation anesthesia than it is to carry out spinal anesthesia or paravertebral block."

Brill and Lawrence independent of White found that spinal anesthesia caused a rise in surface temperature of the extremity. They like others, attribute the rise in temperature to a vaso-dilatation "following chemical block in spinal anesthesia".

Brown suggested determining the vasomotor index by intravenous foreign protein therapy (triple typhoid vaccine).

The vasomotor index which Brown speaks of is obtained by determining the rise in surface temperature and subsequently the rise in temperature of the mouth. This increase is divided by the number of degrees increase in the blood or mouth, and gives a figure which indicates that for every degree rise in temperature of the blood there is in the temperature of the skin a certain number of degrees rise which is largely of vasomotor origin. "A low vasomotor index militates against the value of operations on the sympathetic system", according to Adson and Brown. This is important because in thrombo-angiitis obliterans, or

Buerger's disease, we have essentially an organic lesion.

Allen and Smithwick make use of non-specific protein therapy (typhoid vaccine) after the plan of Brown. They advocate the initial dose of about 125,000,000 to be repeated once a week. Never more than 300,000,000 bacilli at a single dose. They believe that results justify continuance of the use of the vaccines in the treatment of certain cases, but they believe there is a danger particularly from thrombosis.

When giving typhoid vaccine intravenously, as a therapeutic measure, one should be aware of the reaction which is rather characteristic.

First, the peripheral circulation becomes slower during the first hour with an associated decrease in surface temperature and a chill.

Secondly, the temperature in the mouth rises three to six degrees, the peripheral circulation is speeded up to three degrees for every degree of general body temperature rise. At times this rise is maintained for several days.

Allen gives the following advice with reference to the use of typhoid vaccines: (1) It should not be used in arteriosclerosis of a marked degree. (2) It should never be given without preliminary heating of extremities by means of electric pads or other heating devices at least one-half hour before giving the vaccine. (3) The first dose should be small, preferably 25,000,000 of mixed organisms. (4) The vaccine should be given in the vein and not around it. (5) The vaccine should be given slowly. (6) Patients should be hospitalized.

One therefore sees that the use of triple typhoid vaccine, either to determine the vasomotor index or for therapeutic purposes is not without danger, and that if it is used the technique and precautions, as suggested by the author, should be meticulously observed.

White advocates spinal anesthesia and paravertebral block to determine the difference between spasm and organic disease.

Smithwick and White also advocate exposure and injection with alcohol of peripheral nerves of the lower extremity for the relief of pain.

#### TREATMENT

It is true that dilatation of vessels follows re-



removal of sympathetic control by ganglionectomy, paravertebral block and other such measures, in the area under control of the particular ganglions provided there are no obliterative changes. Dilatation, which results from blocking of sympathetic control, or removal of ganglions, is evidence that the disease manifestations are the result of vascular spasm.

The operation of periarterial sympathectomy has been largely discarded because its effects are local. Ganglionectomy and alcohol blocks have been substituted as more effective procedures. There are none who advocate ganglionectomy in diseases where the changes are obliterative in character.

It is essential to remember that Buerger's disease may and does affect the entire vascular tree. Many of the unfortunate subjects of Buerger's disease die of coronary disturbances.

Granting that ganglionectomy does cause a dilatation of the vessels in the extremities in question when vaso-spasm is the responsible factor it cannot affect the size of the lumen of the vessels when their elasticity is interfered with by organic changes such as characterize true Buerger's disease. Reports of disappointing results following extensive ganglionectomy by accurate and enthusiastic observers are already appearing.

Smithwick, Freeman and White state "We have already observed a recurrence of vascular spasm after complete sympathectomy in a number of cases of Raynaud's disease; in two instances the recurrence appeared within two weeks after the operation. The immediate results have been very satisfactory, but the same cannot be said of the end results."

"We have found the beneficial effect of lumbar ganglionectomy to be more permanent than that of dorsal ganglionectomy."

"One patient was symptom free for nine months after sympathectomy of both upper extremities, and then vascular spasm developed which resulted in mild gangrene of the tips of two fingers of each hand during the tenth month."

These statements are a decided blow to the ardor of those who like to perform spectacular and almost miraculous cures.

We are also reminded that ganglionectomy, whether it be cervicodorsal or lumbar, is not a minor procedure. One should consider seriously less dangerous procedures which are more physiologic and efficient, even though they are not as immediately spectacular, if such procedures are available. I believe that one such procedure of developing collateral circulation by mechanical means has recently been suggested by Louis Herrmann and Mont R. Reid. In this method they advocate the utilization of negative and positive pressures. This method has the advantage of being applicable to all of the extremities at the same time. It does relieve pain, favors healing of ulcers and in many instances seems to prevent the need for amputation.

Since Mont R. Reid presented the results of the work done at the Vascular Clinic at Cincinnati by Louis Herrmann and himself I have had occasion to utilize the Pavaex method in twenty-one cases.<sup>†</sup> The groups include one patient who had had an embolectomy done three and one-half months prior to my first observation of him. Brief history of his case is as follows:

Mr. C. M., aged 52 years. While in the bath was suddenly seized with an acute agonizing pain in his right shoulder. Within a few hours the hand had turned purple and there was no sensation in it. An embolus was removed from the brachial artery. About three weeks following the operation he developed a severe pain in the hand which was only relieved by morphin or dilaudid.

When the patient presented himself on December 20, 1934 the right arm was found to be smaller than the left from the shoulder down. There was a scar in the antecubital fossa. The forearm was flat when compared to its fellow. The fingers were dry and had lost their normal lustre. The normal creases of the hand were obliterated. There was evidence of recent ulcerations of the pulp of the index finger, marked atrophy of the pulp of all of the fingers and atrophy of the thenar and hypothenar spaces. There was marked limitation of motion of all of the fingers and of the wrist. The slightest touch of the whole hand caused pain.

The radial pulse was palpable, but not nearly as full as on the opposite side. The hand was dry and has a parchment-like feel.

<sup>†</sup>Since the preparation of this article eighteen new cases have been treated by the Pavaex method, making a total of 39 cases to date.

The surface temperature was much lower on the right side than on the left.

The patient was immediately started on Pavaex treatment. He was given treatment twice a day. After the second day the patient noted a greater freedom of motion of his fingers, there was improvement in the color and he no longer had to take drugs for the relief of pain.

Five days after beginning treatment thermocouple readings indicated a rise in the surface temperature. The color of the hand had improved, so much so that there was no longer pallor noticeable and the finger tips had a reddish color. An increased range of motion of the wrist and interphalangeal joints was noted.

By January 2, twelve days after the onset of treatment, the skin was moist and he was able to approximate his thumb to the palm of his hand. The patient felt so much improved that he decided to go on a trip to attend to some of his business affairs.

The improvement in this case was spectacular, particularly with reference to the relief from pain, increase in surface temperature and the increased range of motion. The relief from pain in this case is worth more than passing comment as this patient had been taking morphin and dilaudid at least once or twice each night. After the second day of his treatment he did not take morphin or dilaudid, as far as I know, for the relief of pain.

There was one case in which a ligation of the brachial artery was done. Brief history as follows:

Case Mr. B. B., aged 18 years. Injured on December 23, 1934. Treated by Drs. Lacroix and Werling at Touro Infirmary. It was necessary to ligate the brachial artery. When I saw him the following morning in the ward of Touro the hand was cold as compared to the opposite side.

Patient was immediately placed on Pavaex treatment. These treatments were given daily. The color of the hand remained good and when last seen, February 5, there was no apparent difference in the size or color of the two hands. There was no limitation of motion of the fingers, the skin was moist and the radial pulse was palpable though not nearly as full as on the opposite side.

This case is typical of the value of early use of methods to develop collateral circulation. No one will deny the possibility of gangrene when there is a sudden interference with circulation through the main trunk of an extremity. Efforts have been made in the past to avoid such

tragedies, sometimes with success, at other times more or less atrophy, if not gangrene, has resulted. With the aid of methods capable of developing collateral circulation applied early one may hope to be able not only to prevent gangrene, but to prevent atrophic changes in the extremity.

In this case treatment was kept up for about six weeks. At the end of that time there was apparently no difference in the appearance or range of motion of the joints of the extremity.

In group 2 there were eight arteriosclerotics, three diabetics, and six cases of Buerger's disease. In these cases the results of treatment have been most gratifying. Relief of pain, healing of sluggish wounds and apparent avoidance of amputation have been outstanding gratifying criteria on which to base the value of the treatment in Buerger's disease, as well as in arteriosclerosis and diabetes where wounds have existed.

In trying to summarize my experience with vascular diseases of the extremities the first thought that comes to my mind is the utter hopelessness which characterized the attitude of the medical man and surgeon until recently when confronted with an apparent impending gangrene, a case of Buerger's disease, painful feet in arteriosclerosis, embolic cases, and surgery in the diabetic. It was natural that waves of enthusiasm should have followed in the wake of each new procedure. Recently Dr. Robert Millikan, the great physicist, summarized the mental attitude of the workers and the public under these conditions: "individual workers, unrestrained in a new field tend to set up hypotheses that seem to fit their particular experiments or their particular theories. If the present craze for the new regardless of the true, in art, science, society and government, goes much further the remedy may be found in the prospect that a nugget of sober uncolored truth may become the most exciting news there is just because of its rarity. I venture the prediction that our present age, because of its craze for the new regardless of the true, will be looked back upon by our children's children with more amazement and ridicule than we ourselves feel because of the credulity

of the middle ages or the smugness and hypocrisy of the Victorian age."

The question has been often put why have you become interested in the method of Herrmann and Reid, that is the Pavaex or automatic suction and pressure. The answer seems obvious. In the past in the case of Buerger's disease the patient could only look forward to repeated amputations and no matter where the sufferer went the results were the same. It is natural that with the development of knowledge of the sympathetic system that some leaders would try to improve the prospects of these unfortunate sufferers through surgery applied to the sympathetic system.

Pariarterial sympathectomy was heralded by Leriche as a means of procuring relief from pain and of producing a vaso-dilatation, particularly in Raynaud's disease. There followed the typical rush of enthusiasts to state that they had not only confirmed Leriche's findings, but that they had extended the usefulness of the procedure. Even Buerger's disease and Weir Mitchel's erythromelalgia were included in the list of curable conditions. In order to justify their claims that Buerger's disease was amenable to such a method they had to conclude that in some cases of Buerger's disease vaso-spasm predominates. This was necessary to prove a point. Most observers are in agreement that in Buerger's disease the condition is more than a spasm. The obliterative nature of the vascular change does not permit of the acceptance of any method which has for its object a removal of vaso-constrictor control.

For this reason ganglionectomy is neither physiological nor effective as a cure or elective method of treatment in either Buerger's disease, arteriosclerosis or in diabetes.

There is to my mind another valid objection to ganglionectomy in this group of diseases—they are universal in character, not local. An operation affecting only a part of the vascular tree is illogical as a means of treatment.

Last, but not least, ganglionectomy, whether it be cervico-dorsal or lumbar, is by no means a minor operation, it must carry a mortality of magnitude, and certain surgical accidents must complicate some of these procedures. Com-

plications and fatalities are not likely to appear in the early literature.

Efforts by many workers to determine if possible the predominance of vaso-spasm or obliterative phenomena have provided us with several valuable tests—spinal anesthesia, general anesthesia, injection of peripheral nerves, injection of ganglia, intravenous foreign protein (typhoid vaccine).

The vasomotor index suggested by Brown is a valuable guide at times.

The thermocouple, as suggested by Scott and Morton, is a valuable means of noting changes in the surface temperature.

Arteriography provides us with a means of determining the actual amount of the peripheral arterial bed and the patency of the arterio-venous communication.

Believing, as I do, that simple physiologic methods, applicable to all extremities with ease, offer hope of relief from pain and possibly the saving of limbs, I decided to try the Pavaex method. It is by no means a cure-all, it does help and probably has prevented several amputations, favored healing of sluggish wounds, and in several instances the patients formerly crippled and incapacitated on account of pain have been able to go back to their usual occupations.

I submit for your consideration, first, the fact that vascular disturbances of the extremities which as a rule we are called upon to treat are merely local manifestations of a general disease.

Second, that where obliterative or organic disease of the vessels exists local operation, such as ganglionectomy, does not offer more than relief of pain of a particular part. They cannot cure a disease in which the changes are to be found in every part of the vascular tree as evidenced by the fact that many of the patients who die of Buerger's disease die with evidence of coronary disease. This at autopsy has been shown to be identical with that found in the extremities.

I further submit that if collateral circulation can be improved and pain relieved by methods which cause a dilatation of the peripheral vessels and thus help establish a collateral circula-

tion to prevent gangrene, that such methods should be used by preference over operations which are of considerable magnitude and whose value has not been proven, and which have been in use too short a time to state any ultimate results except to say that some of them have resulted in failure.

In the after care of patients, who by reason of an operation or an embolic process have had a sudden interference with circulation in an important trunk vessel, the immediate value of a simple procedure such as Pavaex treatment is to be preferred to either ganglion removal or block.

I believe that almost all are agreed that there is no cure for Buerger's disease thus far. I believe that the mechanical treatment for obtaining passive vascular exercise as suggested by Herrmann and Reid offers one of the most valuable contributions to the treatment of nutritional disturbances of vascular origin that have thus far been devised.

#### DISCUSSION

Dr. Rudolph Matas: The apparatus recently devised by Drs. Mont Reid and Louis Herrmann, of Cincinnati, for the purpose of developing and improving the peripheral circulation in the diseases and conditions in which ischemia threatens the nutrition of the extremities, is a notable contribution to the therapeutics and prophylaxis of this large and increasing class of circulatory disorders.

The principles and technic that underlie the mode of treatment, which the authors designate by the contracted term "Pavaex," meaning passive *vascular exercises*, have been well described by Dr. Cohn who has the credit of introducing and applying it in New Orleans for the first time.

Though I have had no personal experience with this treatment, I have seen enough of Dr. Cohn's practice and results to confirm my own theoretical anticipations of its great value in the cases in which it is indicated.

#### HISTORICAL REMARKS

The principle of alternating negative and positive pressure upon which the Pavaex apparatus is based, suggests many interesting side lights of history. In so far as the vacuum producing principle, it goes back to remote antiquity,—to Hippocrates, Galen, Celsus, when the "sucking cup" for dry or wet cupping was familiar to the Greek and Roman practitioners. In its more primitive form, it is well exemplified by the practice of sucking venomous or poisoned wounds which is common to all the savage races. It is interesting to know

that the Choctaws and other Indian tribes that inhabited Louisiana, practiced wet cupping long before they ever came in contact with the European explorers, as we learn by Swanton, an excellent authority. The medicine men, in order to draw the evil spirits out of diseased or inflamed parts, "made a number of incisions into the skin with a sharp flint, covering a surface about the size of a silver dollar over which they placed the wide end of a pierced horn and sucked it until it was filled with blood."

A good sized museum could now be filled with the different relics and models of the cupping glasses and horns that were in vogue from the middle ages to the beginning of the 19th century, when the barber surgeons exercised their ingenuity in devising vacuum cups (*Cucurbitula*) for "dry" and "wet" cupping which were designed to draw blood to the surface.

#### JUNOD, THE PRECURSOR

This tended to expand the principle of blood derivation by aspiration which found its highest expression in 1839, when Junod, in Paris, devised his "grande ventouse" or giant cup (known as Junod's boot, when applied to the lower extremities) and elaborated a method of therapy which he designated as *Hemospasia* (blood attraction) by which he sought to relieve congestion or inflammation of the deeper parts in the extremities and internal organs by drawing the blood to the surface. *Hemospasia*, a term scarcely known at present, was very familiar to the practitioners of the period between 1835-1875, during which the method of blood derivation had attained considerable vogue through the influence of Junod's vigorous enterprise and able advocacy. He devised many appliances which could be adjusted to any part of the body. They essentially consisted of air tight glass chambers, such as now used in the Pavaex apparatus, of which the Junod boot is the best known example. In this, as in other models, the leg or part to be treated, was massively *encased* in a pneumatic chamber shaped to fit it. Once in place the air was aspirated by means of a pump which created a vacuum. This immediately drew the blood and fluids of the tissues to the surface, thereby determining a peripheral congestion or hyperemia which was proportional to the degree of negative pressure created in the air chamber. By pumping air *into* the chamber, the process was reversed; the atmospheric pressure was increased and the receptacle was transformed from a *negative* to a *positive* pressure chamber.

By increasing the air pressure, the blood was driven from the surface to the depths and a state of peripheral or cutaneous anemia was induced which was proportional to the increase in the atmospheric pressure. This positive pressure principle was utilized by George Crile in 1906, when



he invented his inflatable suit as a means of auto transfusion for operations on patients depleted by hemorrhage and shock. But Junod was more interested in Hemospasia by *negative* pressure on the vacuum principle, by which he sought to relieve the congestion and inflammations of the internal organs. Not satisfied with inducing a passive hyperemia in one limb, he had air chambers made to encase both lower extremities and the pelvis for the relief of pelvic and abdominal inflammation in gynecological practice. By exhausting the air in this chamber, he could draw blood to the lower extremities so effectively that, as his experiments on normal human subjects show, he could lower the general blood pressure to the point of inducing a faintness approaching syncope. This he called his hemisomatic chamber. He went further and devised other vacuum chambers which he adapted like huge cups to the abdomen, the thoracic, the precordial, scapulo-thoracic, cervical and vertebral regions, which he utilized for the treatment of pneumonia, pleurisy, pericarditis, peritonitis, etc. Finally, he constructed the *Somatic* chamber in which the *whole* body was enclosed, leaving the head out. By pumping the air out of the chamber, he drew the blood to the whole surface of the body and in this way he sought to counteract the congestion of the internal organs which is so characteristic of the algid stages of Asiatic cholera and the chills of the pernicious fevers. He also resorted to the same method to induce an anemia of the brain in apoplectic and congested states, meningitis, etc., by substituting the mechanical displacement of the circulating blood, he aimed to prevent the permanent loss and irreparable damage to the organism by the wholesale and indiscriminate practice of blood letting which was universal in his day.

No one can read Junod's studies on the physiologic and therapeutic effects of air compression and rarefaction on the body as a whole and on its isolated extremities (published in 1834), or his observations on Hemospasia as applied to the treatment of gunshot and suppurating wounds and other surgical diseases of the extremities (1847) without being impressed with the earnestness, the originality, the scientific spirit and ingenuity of the man.\*

Junod was undoubtedly an enthusiast with great visions which could not be realized in view of the ignorance of the fundamental causes of disease which prevailed in his time and prevented him from differentiating between a purely symptomatic and a curative treatment. He could not abort, arrest or prevent a pneumonia, a pleurisy, a pericardi-

tis, meningitis or peritonitis by simply abstracting or sequestering blood from the inflamed organs or tissues because he was simply dealing with objective phenomena and not their causes. It was not until three decades after his death, that the Pasteurian revelations came to explain the mystery of infection and that the treatment of disease on an etiological basis was made possible. None the less what Junod accomplished in modifying the course of surgical diseases of the extremities and of the internal organs by his methods of hemospasia is truly remarkable. Though he failed in his main objectives he planted seed-thoughts and inventions which have found fruitful application in many fields which will remain to his everlasting credit. His researches on the effect of atmospheric hyperpressure are a key to Caisson disease, and his positive pressure chamber is the precursor of Crile's pneumatic suit. His negative pressure chambers are likewise the precursors of Bier's aspirating cups and his Somatic chamber is the forerunner of the celebrated negative pressure chamber which Sauerbruch devised, in 1907, to counteract pneumothorax in thoracic operations; and again we see a projection of his thought in the present ingenious Drinker chamber for artificial respiration. Finally, Junod's hemostatic principles find application in their most modern scientific expression in the alternating rhythmic *plus* and *minus* air pressure of the Pavaex apparatus that Reid and Herrmann have devised for the treatment of the vascular deficiency diseases of the extremities, which is the subject of Dr. Cohn's paper.

This method, I believe, is a safe and most efficient means of applying vascular gymnastics to the peripheral blood vessels of the extremities. It does not conflict with other classical methods of developing the collateral circulation in acute or chronic obstructive lesions and diseases of the main arteries. The excellent results obtained by Dr. Cohn in a case of embolic obstruction of the brachial artery in which the intense pain of the famished tissues was relieved by a few sittings of Pavaex, have lead me to try it, with Dr. Cohn's assistance, as an adjunct to systematic compression of the femoral artery in an enormous and circumscribed arterio-venous hematoma of the femoral vessels in which the collateral circulation was compromised and doubtful, and thus far with good effect.\*

It is evident that Pavaex, like all other methods for the improvement of the collateral or supplementary circulation in obstructive disease of the peripheral arteries, must have its limitation, in the presence of a progressive organic disease such

\*For references to Junod's publication, see Index Catalogue, Surgeon General's Library, 1st series, p. 311, vol. vii, 1886 and additional references under "Haemospasia" p. 170, vol. vi, 1884.

\*Since this discussion took place, this patient has been cured by an obliterative endo-aneurismoraphy without the slightest complications.

as senile and presenile arterio-sclerosis, thromboangitis obliterans, specific arteritis, etc., which cannot be dealt with etiologically.

It is too early to attempt an estimate of the comparative value of this treatment with other methods, but the results thus far obtained are so encouraging that it is hoped that the systematic application of the Pavaex exercises alone or combined with the well established classical (bloodless) methods of improving the peripheral circulation, will diminish the indications for surgical relief by sympathectomies, ganglionectomies and supra-renalectomies which, whether performed by actual excision of the ganglia by alcoholization are, at best, only palliative remedies in the presence of progressive organic arterial disease. Without questioning the demonstrated value of the sympathectomies, ganglionectomies and adrenalectomies which now constitute an important and conspicuous branch of surgical practice, it cannot be denied that apart from the angiospastic disorders of the extremities in which these are especially indicated, they are of doubtful curative value and that they involve dangers, especially in the major interventions, which are often far graver than the loss of the extremity which they are intended to preserve.

In conclusion, I would say, as a pioneer in this field of conservative surgical therapy, that I welcome the Reid-Herrmann treatment as a very valuable addition to our resources for the improvement of the circulation in limbs suffering from vascular deficiency in general and in particular, the class of cases in which there is reason to believe that a supplementary circulation can be developed for the preservation of the extremity. The best results can be expected from the judicious selection and combination of this with the other methods that are now available to meet individual indications.

Dr. Isidore Cohn (In conclusion): I would like to call attention to the fact that we have used Pavaex in the treatment of some old fracture cases, where the patient came in with edema of the extremities. In one case, the edema subsided in ten days, a much shorter time than I have seen with other methods. There is rapidity of healing of ulcers following Pavaex treatments.

When the machines are available for general use the value of the method will be appreciated by larger groups.

## TREATMENT OF HIRSCHSPRUNG'S DISEASE BY SPINAL ANESTHESIA. A PRELIMINARY REPORT\*

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and

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NEW ORLEANS

Congenital idiopathic megacolon, or Hirschsprung's disease, may be defined as a state of obstinate constipation in which organic obstruction is absent. It is characterized by a lengthening and an enormous dilatation of the colon, and a hypertrophy of all its coats, the pathologic changes being usually limited to the left half of the bowel and being most marked in the sigmoid. The rectum is rarely involved. The pathologic picture is exactly that of a chronic partial obstruction at the rectosigmoid junction, although actually no such obstruction is ever found.

The disease begins in infancy or early childhood and tends to become progressively worse. Eventually the patient loses all perception that the bowel is full, and spontaneous evacuations cease entirely. Purgatives and enemas are ineffective because, in spite of the muscular hypertrophy and forcible contraction of the involved bowel, orderly peristalsis does not occur. As a result of the fecal stasis and decomposition colitis develops and periodic attacks of diarrhea are common. Vomiting also is frequent. The inevitable result is a severe toxemia, associated with anemia and emaciation, and the typical patient is a thin, sallow, lethargic child, with an enormous protruding belly. Few of these patients reach adult life, and those who do survive because the disease is milder lead a miserable existence.

Rankin, Barga and Buie enumerate twenty-two possible theories of the origin of Hirschsprung's disease, most of which are

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promptly eliminated by the definition of the condition which we have quoted and which is generally accepted. Indeed, the only really tenable theory is that some disturbance of the motor mechanism of the colon is responsible, and even that theory is not entirely satisfactory.

The churning motion which is normally present in the right half of the colon is entirely absent in the left. In the left half intermittent waves of contraction are preceded by waves of dilatation, most of which do not involve the region of the rectosigmoid junction. It may be said that this point serves functionally as a sphincter, (sphincter of O'Beirne). At intervals, however, this segment does relax, and the fecal mass which has been packed into the sigmoid by the mechanism just described is permitted to pass into the rectum, from which, physiologically, it should be promptly expelled.

The intrinsic neuromuscular mechanism of the bowel permits the carrying out of this act independent of extrinsic stimuli, although under normal conditions the central portion of the autonomic nervous system acts as a pacemaker. The sympathetic nervous system inhibits contraction of the gut and stimulates contraction of the internal sphincter, and it is believed, although it is not yet proved conclusively, that the parasympathetic system causes contraction of the bowel and dilatation of the sphincter. Proper coordination of these two systems presumably causes normal, effective peristalsis.

Hirschsprung's disease is now generally explained as due to an overstimulation of the sympathetic efferent supply to the colon, which causes dilatation of the bowel and contraction of the internal sphincter. Against this theory, however, is the fact that an arrest of peristalsis, such as would be produced by sympathetic stimulation, is not characteristic of megacolon. Furthermore, since the rectum is rarely involved, contraction of the internal sphincter seems to have no bearing on the discussion, and contraction of the rectosigmoid sphincter, which might reasonably be considered a cause, has

not been observed to follow such stimulation.

Hawkins has suggested as a possible cause a segmental neuromuscular defect at the pelvi-rectal junction, and Cameron has been able to demonstrate degenerative changes in the intramural plexus of the colon such as Hurst and Rake have demonstrated in the lower esophagus in certain cases of cardio-spasm. On the other hand, this etiologic factor would seem to be eliminated by the fact that normal peristalsis is established by the type of sympathectomy devised by Rankin and Learmouth, which results in complete isolation of the colon from its central connection.

Before taking up the various procedures devised for the relief of congenital megacolon, one or two anatomic facts must be recalled: that the preganglionic neurons to the distal colon pass from the spinal cord through the first and second lumbar sympathetic ganglia, and descend to the inferior mesenteric plexus in the pre-aortic plexus, and that it is believed that the corresponding parasympathetic supply comes from the sacral segments and courses upwards to the inferior mesenteric plexus along with the left hypogastric nerves.

Wade and Royle, in 1926, having observed that lumbar ramisection for spastic paraplegia brought about the correction of obstinate constipation, extended the procedure to a case of Hirschsprung's disease, on the assumption that the condition might be due to autonomic incoordination with sympathetic preponderance. The result was so gratifying that the operation was repeated in other cases, with success in all but two. A year or two later Judd and Adson resected the lumbar sympathetic chain on the left side in one case of megacolon and on both sides in another, and Rankin and Learmouth resected the presacral nerve and the pre-aortic and inferior mesenteric plexuses. All these operations were followed by good results. It should be noted, however, that if our conception of the parasympathetic nerves is correct, the operation of Rankin and Learmouth



leaves the colon entirely free of a pace-maker.

Since none of these procedures could be expected to yield satisfactory results in any case of mechanical origin, the next step was to devise some method of determining before operation that the case in question was actually due to autonomic imbalance. For this purpose Scott and Morton conceived the idea of using spinal anesthesia, on the basis that it isolates the colon from its central autonomic control and causes its complete evacuation. They used the test in a case later submitted to sympathectomy, as well as in one case in which the operation was contemplated but was not done.

These same authors, with S. J. Stabins, have recently reported the startling fact that this second patient, who did not submit to sympathectomy and who received only the therapeutic test of spinal anesthesia, has remained well for more than four years with no additional treatment other than ordinary care of the bowels. Equally good results were achieved in another patient with megacolon treated only by spinal anesthesia, and in two patients with obstinate constipation, although in the other instances the period of observation has been considerably shorter. We might add that this is not the only report of permanent results following the injection of novocaine for autonomic disorders. Livingston and other observers have also noted that permanent or semipermanent relief of symptoms has followed the blocking of the sympathetic ganglia by novocaine.

Since the administration of spinal anesthesia, even though the procedure should need to be repeated at longer or shorter intervals, is preferable, from every standpoint, to the performance of sympathectomy, we felt it incumbent upon us, when the method came to our attention, to employ it in two cases of Hirschsprung's disease then under our observation, in both of which sympathectomy was contemplated. We are aware of the lack of justification for the report of only two cases, both observed for only a short period

of time, but because of the extraordinary results achieved in at least one of them by this simple method, we feel warranted in violating the usual conventions.

#### CASE REPORTS

Case 1. A negro male, aged 8 years, was admitted to the medical service of Dr. R. H. Kampmeier in Charity Hospital January 6, 1935, complaining of lower abdominal pain and extreme constipation. The previous history was irrelevant except for a story of extreme constipation since the age of two, which had been aggravated for two or three months before admission. Purgatives or enemas had always been required before a bowel movement, and at times there was no evacuation for eight or ten days. Physical examination revealed a well developed but rather undersized and undernourished child, with a thin-walled and protruberant abdomen. Visible peristalsis was detected at one examination.

The immediate distressing symptoms were relieved by flushes, which were followed by copious bowel movements. Roentgen ray examination with barium enema five days after admission revealed no obstructive lesion. A diagnosis of megacolon was made on the fact that the transverse and ascending colon did not fill satisfactorily, and that the barium tended to remain in the greatly distended distal portion of the colon. Gastrointestinal roentgen ray study nine days later confirmed the diagnosis; the barium used in the enema was still present in the distended colon, in spite of repeated flushes.

Surgical consultation was promptly sought, and February 8, instead of the sympathectomy which had been planned, the child was given spinal anesthesia, under ethylene anesthesia. Seventy-five mg. of novocaine crystals, diluted in 3 c.c. of spinal fluid, was injected into the third lumbar interspace, and produced anesthesia up to the diaphragm. The patient almost immediately had a spontaneous bowel movement, and has had almost daily spontaneous movements in the month that has elapsed since. A second barium enema three weeks after the administration of the anesthesia showed the colon definitely contracted, with some evidence of haustration not present at the time of the first examination. The child is still under observation in the hospital and is being given the careful attention which all so-called "cured" patients require practically all of their lives.

Case 2. A white male, aged 9 years, had been under the observation of Dr. J. E. Strange since October, 1931. He had been constipated all his life. The colon could be emptied by flushes and purgatives, but spontaneous bowel movements never occurred. Some slight improvement was brought



about by dietetic measures, but the constipation remained almost intractable most of the time. Repeated roentgen ray observation by barium enema showed a marked lengthening and dilatation of the descending colon and sigmoid, with very little of the opaque substance beyond the splenic flexure. In April, 1934, the constipation was replaced by frequent liquid stools. There was considerable abdominal distention, but pain was not complained of.

When the child was seen in consultation by one of us (J. D. R.) in January, 1935, sympathectomy was suggested tentatively, although there was doubt as to whether the condition was a true Hirschsprung's disease. As in the first case, spinal anesthesia was substituted for the operation, but the administration was done under local anesthesia and because of the uncontrolled movements of the child the novocaine (100 mg. diluted in 3 c.c. of spinal fluid, injected into the third lumbar interspace) did not get completely into the subarachnoid space, and the anesthesia had worn off entirely at the end of half an hour. Good results could scarcely have been expected under the circumstances, but a measure of success has been evident: The patient had a bowel movement on the table and has had occasional spontaneous movements since, although daily flushes are still necessary. Since the reason for the failure in this case is so obvious, it is proposed to repeat the administration of the spinal anesthesia shortly, this time under ethylene anesthesia, and better results are hoped for.

Stabins, Morton and Scott merely report their cases, modestly attempting no explanation of their results. Only one possible explanation occurs to us, and we advance it for what it is worth: If Hirschsprung's disease be considered as a vicious autonomic habit, it may be that the spinal anesthesia, by temporary arrest of the central autonomic control, permits a restoration of normal function, which may be interpreted as the establishment of normal habits within the autonomic system during the period in which the intramural nerve supply is allowed to act without extrinsic influences.

#### BIBLIOGRAPHY

1. Cameron, J. A. N.: On the etiology of Hirschsprung's disease. *Arch. Dis. Childhood*, 3:210-212, 1929.
2. Hawkins, H. P.: Quoted by Rankin, Barger and Buie.
3. Homans, J.: *Textbook of Surgery*, ed. 3. Springfield, 1935, C. C. Thomas.
4. Hurst, A. F., and Rake, G. W.: Quoted by Livingston.
5. Judd, E. S. and Adson, A. W.: Lumbar sympathetic ganglionectomy and ramisection for congenital

idiopathic dilatation of the colon. *Ann. Surg.* 88:479-498, 1928.

6. Langley, J. N. and Anderson, H. K.: On the innervation of the pelvic and adjoining viscera. The lower portion of the intestine. *J. Physiol.* 18:67-105, 895.
7. Learmouth, J. R. and Markowitz, J.: Studies on function of lumbar sympathetic outflow; relation of lumbar sympathetic outflow to sphincter ani internus. *Am. J. Physiol.* 89:686-691, 1929.
8. Livingston, W. K.: *Clinical Aspects of Visceral Neurology*. Springfield, 1935, C. C. Thomas.
9. Rankin, F. W., Barger, J. A. and Buie, L. A.: *The Colon, Rectum, and Anus*, Philadelphia, W. B. Saunders, 1932.
10. Richardson, E. P.: Diseases of appendix, small intestine and colon. *Graham's Surgical Diagnosis* 2:627-715, Philadelphia, 1930, W. B. Saunders Company.
11. Royle, N. D.: New operative procedure in treatment of spastic paralysis and its experimental basis. *Med. J. Aust.* 1:77-86, Jan. 26, 1924.
12. Scott, W. J. M. and Morton, J. J.: Sympathetic inhibition of the large intestine in Hirschsprung's disease. *J. Clin. Invest.* 9:247-262, 1930.
13. Stabins, S. J., Morton, J. M. and Scott, W. J. M.: Spinal anesthesia in the treatment of megacolon and obstinate constipation. *Am. J. Surg.* 27:107-111, Jan. 1935.
14. Telford, E. D., and Stopford, J. S. B., quoted by Livingston.

#### DISCUSSION

Dr. G. C. Anderson: Discussion of a paper like this is a bit difficult because the essayist in a very terse and adequate manner says about all there is to be said on the subject.

This treatment of megacolon is one of the few indications of sympathetic surgery one might say. In 1924 Royle and Hunter attacked the sympathetic system for the purpose of relieving spasticity. After operation on a number of War veterans marked improvement in evacuation of the bowels was noticed, some of these men having been markedly constipated previously. Following this, the operation was done in various ways. They did ramisection. Other men did ganglionectomy. This more or less formidable procedure requires a large incision, wide exposure, and frequently the intestines have to be taken out of the intestinal cavity, and on one side one has to retract the aorta and on the other the

Learmouth and Rankin operated on the inferior mesenteric and presacral nerve plexus with apparently good results. Later, Sims in Memphis operated one by presacral nerve alone and seemed to get just as good results as if he had carried it further up and done the operation on the inferior mesenteric plexus.

Then we received this astounding report of a child given only spinal anesthesia, and for some reason the parents decided against operation and he remained well over a period of four years, or just as well as these patients ever get. It seems rational if patients can be relieved by introduction of anesthesia in the subarachnoid space there is no need for further surgery.

I do not think there is any satisfactory explanation

ation of why this happens. There is just a possibility that after interrupting this holding mechanism, as some call it, or braking mechanism, and allowing the normal habit to be instituted, then it may go on to its own cure. An analogy might be, of course, induction of artificial respiration after the patient has ceased to breathe. If let alone he never will breathe again. There are even cases reported where the heart has stopped and been started in some way. So far as I can see that is about the only tenable explanation of this. Get this autonomic habit established for a time and then it carries on. Some few of these cases have had to have their injections repeated. One I know of done about four years ago has had three at intervals of about one year, and some get along perfectly well without any more injections.

It certainly appears to me for the present time the patient should have the benefit of a simple procedure of this nature before attempting any more extensive surgical procedure of any description.

Dr. Clyde Brooks: I have been very much interested in this paper because in my work in pharmacology I pay a great deal of attention to the balancing of vegetative neurons; of the parasympathetic and sympathetic, and I am more accustomed to the theorizing of the laboratory man than I am to the empiricism of the practical man. So if you want another theory, I can easily supply you with one. I cannot, however, guarantee that it is especially well founded. It occurred to me while the essayist was speaking that injection of spinal anesthetics might well produce some permanent depression or injury to the sympathetic nervous system, so that afterwards there would be a suppressed balancing action between the sympathetic and parasympathetic. It gives me the idea that we should make some careful studies of the action of spinal anesthesia to see whether there be any permanent change in the balance between the sympathetic and parasympathetic.

Dr. Rives (closing): Dr. Brooks' suggestion that by this method there may occur actual damage to the nerve cells of the autonomic system is quite tenable, as damage to the anterior horn cells of the spinal cord from the intravenous injection of novocaine has been reported, while cases in which there is a certain amount of motor disability following spinal anesthesia are not uncommon. There is some reason, therefore, for suspecting that some permanent damage may occur.

I have speculated to a considerable extent on the possibilities involved, and one thing impresses me particularly, that operations which produce very different kinds and degrees of damage to the autonomic nervous system have all had the same effect on the motility of the colon. The operation of Hunter and Royle destroys the pre-ganglionic axons only, at least so far as we know. But the op-

eration of Judd and Adson destroys not only those axons but also the ganglionated sympathetic chain, though, again so far as we know, it does not disturb the para-sympathetic system at all. The operation of Rankin and Learmouth, on the other hand, removes the pre-aortic plexus, the inferior mesenteric plexus, and the sacral nerve, through which nerve the parasympathetic supply of the left half of the colon is supposed to reach the intestine. This operation, therefore, apparently disconnects the colon entirely from the central nervous system. If we are dealing only with an overactivity of the sympathetic system, then why do we get quite as good results when we remove both the sympathetic and the parasympathetic supply? Presumably, spinal anesthesia also leaves the gut entirely disconnected from the spinal cord and therefore dependent upon its intrinsic nerve supply; plus any independent function that may exist in the ganglion cells.

I have learned from Dr. Anderson that Semmes of Memphis has achieved equally as good results by resection of the sacral nerve alone. Since these procedures arrive at the same result by widely different kinds and degrees of damage to the sympathetic nervous system, it seems reasonable to conclude that some factor other than damage to the efferent nerve supply of the colon is responsible for the effect. It seems possible that the results achieved may not be due to interference with the efferent impulses, but rather due to interruption of the afferent impulses which have been producing a disordered activity in the efferent system. I do not believe that anyone knows definitely what the course of the afferent supply of the colon is, and so no one can affirm categorically that any procedure does or does not destroy it or inhibit its activity.

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## RENAL TUBERCULOSIS\*

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This subject, although chiefly surgical in treatment, is medical in scope. It is presented to this section not because we have any new ideas as to treatment or diagnosis, but with the hope that it will emphasize to each of us the importance of a repeated search for the bacilli in the urine, and the importance of pyelograms either intravenous or retrograde during the

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treatment of any case of tuberculosis, pulmonary or extra pulmonary.

In the urogenital tract the organ first affected is by far most frequently the kidney with the involvement of the other organs of the tract secondary thereto. The primary focus of infection which is most frequently the lung, in quite a number of cases at autopsy has been shown to be fibrotic or arrested. The mycobacterium tuberculosis usually invades the kidney by the blood stream and we believe that this is the mode of infection in the vast majority of cases as the lymph supply is chiefly efferent. The lesion is most commonly localized in the pelvic or pyramidal portions of the kidney and occasionally in the cortex. The tubercles are surrounded by fibrous tissue. Central caseation of the tubercle occurs and the calyx is usually involved so that the tip becomes irregular, enlarged, and surrounded by tuberculous tissue. Coalescing of the tubercles and a continuation of this process may eventually involve the entire kidney and convert it into a series of abscess cavities with fibrous walls. The deposition of calcareous particles in the caseous material and in the walls of the cavities is rather common. Microscopically renal tuberculosis does not differ from tuberculosis elsewhere in the body. Tuberculous abscesses of the kidneys may go for a long period of time in an apparently quiescent state without discharging pus and bacilli in the urine, presenting the necessity for repeated urinalyses of centrifuged urine in any suspected case.

The onset of renal tuberculosis is usually insidious and symptoms noticeable to the patient may appear long after the original focus has become arrested. In numbers of cases symptoms that cause the patient to consult his physician have not occurred until there is a secondary involvement of the ureter and bladder. Frequency of urination is the most common symptom of urogenital tuberculosis and hematuria the most common of renal tuberculosis. When the two appear together, suddenly and without apparent cause, tuberculosis should be first thought of. Therefore, when a patient presents himself complaining of frequency and hematuria without cause, whether there is a

previous history of tuberculosis or not we are derelict in our duty unless we make repeated painstaking examinations for a tuberculous lesion of the kidney or urogenital tract. Loss of weight occurs frequently and chills, fever, and sweats are present in about 22.5 per cent of all the cases of Young. Localized renal pain and renal colic may also be present. In many instances there may be somewhat of a remission between acute attacks during which time the patient seemingly gets along very well.

The incidence of renal tuberculosis is greater than many of us suspect. Greenberger, Wereshub, and Aurbach state that it comprises 30 per cent of all surgical lesions in the kidney, being more than twice as common as tumors. Of the 500 cases in which necropsy was performed at Sea View Tuberculosis Hospital from June 1932 to April 1934, 252 showed evidence of tuberculous infection. Miliary tubercles were found in 228 of which 187 were bilateral. Only 25 per cent of these complained of urinary symptoms. Organ tuberculosis or destruction of kidney substance was found in only 24 or 4.8 per cent of the cases, 13 of these were bilateral and 11 unilateral.

The relatively high percentage of miliary tubercles found were no doubt due to the fact that frequently in the terminal stages of pulmonary tuberculosis there is a hematogenous dissemination of the bacilli and miliary tubercles are found in the kidney as well as in the liver, spleen, peritoneum and other organs. The percentage of 4.8 of organ tuberculosis appears to us to be about the percentage of manifest clinical renal tuberculosis associated with tuberculosis of other parts of the body. Certainly it appears to be less than 5 per cent. In quite a few of these cases the destruction of the kidney tissue is out of all proportion to the symptoms produced.

According to Woodruff and Bumpus the resistance of renal tissue to tuberculosis may be undergoing a change as its reaction in various parts of this continent appear different. They state that in the Northwest one sees many cases of calcification in the involved areas, not only late but early in the disease. In the eastern clinics calcified tuberculosis of the kidney is

seldom seen, according to them, while in the South renal tuberculosis is relatively rare. Search in the literature reveals a preponderance of cases in the North and East as compared to the South. In my own experience while on the staff of the Mississippi State Tuberculosis Sanatorium for five years, I recall now only five or six cases of tuberculosis of the urogenital tract as a whole, complicating tuberculosis of other parts of the body. I also recall quite a few cases which complained of urinary symptoms, but in which a thorough search of the cause was not made. Therefore, one reason for the rarity of this condition in our southland may be due to lack of investigation on our part, thereby allowing the true condition to go undiagnosed.

The diagnosis does not depend entirely upon finding the bacilli in the urine, but when found we can rest assured that we have a tuberculous lesion somewhere along the urogenital tract, for in our opinion, there is no such thing as bacilluria, even though such a possibility has been mentioned by some. Healthy renal tissue will not secrete the bacilli. The tuberculoma or ulcer has to be present. If the bacilli are found in the urine we should then have a cystoscopic examination made. In the majority of cases when this is done there will be found a tuberculous cystitis, for as a rule the infection has descended from the kidney to the bladder via the ureter and in so doing producing the ulcerations and constrictions and dilatations characteristic of tuberculosis of the ureter, before the patient complains of urinary symptoms and consults his physician. Each ureter and kidney should be catheterized and the urine examined. If bacilli are found in the urine from both kidneys do not make the mistake of concluding that an active process is present bilaterally and therefore think that we have an inoperable case. In many instances only one kidney is affected and there has been a contamination of the catheter as it passed from the bladder thereby contaminating the urine from the opposite ureter. The pyelogram will assist us in determining if only one or both kidneys is diseased.

The guinea pig inoculation is of value, but the chief objection to it is we have to wait from

six weeks to two months for results and even then we can not rely altogether on this as cases have been found positive following nephrectomy that produced negative results in the pig. As Keyes has truthfully stated in his text book on Urology "sometimes all signs fail."

To many of the practitioners in our state in the smaller towns and rural sections, the advantages of a cystoscopic examination, pyelograms and guinea pig inoculation are not ready at hand. Let us not then, when a patient presents himself complaining of frequency and hematuria, be content to stop with an urinalysis, and because albumin, pus and red blood cells are found, call the condition a nephritis, but let us insist, especially if there is a past history of tuberculosis or of exposure, that he or she have a cystoscopic examination and pyelogram made. In many instances we will discover the true condition before it is too late for nephrectomy to save or at least prolong life.

The treatment of renal tuberculosis, once the diagnosis is definitely established, is nephrectomy. Surgical renal tuberculosis characterized by gross changes in the kidneys as shown by pyelography is a progressive disease which will end fatally unless surgical procedure is instituted and the earlier this is done the better the chances of a cure. Though the condition may remain latent for comparatively long periods of time, the tuberculosis may still actually be active.

Medlar in his experiments and works has shown that renal tuberculosis begins as a non-surgical lesion that frequently heals. Let us not confuse this healing with surgical tuberculosis for in the latter condition to delay a nephrectomy is criminal. Contraindication to a nephrectomy exists when there is active tuberculosis elsewhere in the body. Cases have been reported where a nephrectomy was performed in the presence of active pulmonary tuberculosis with beneficial effects, but in our opinion the opposite is more often true. We believe that it is safer to watch the patient carefully and as soon as the tuberculous process in other parts of the body becomes quiescent then perform the nephrectomy under spinal anaesthesia. Nephrectomy should not be performed in the pres-



ence of a myocarditis. Keyes states that tuberculosis of the opposite kidney is not in every case a contraindication where one kidney is gravely involved and the other only slightly involved. It is his opinion that where the opposite kidney is impaired to where the phenolsulphonephthalein elimination is below 30 per cent per half hour after intravenous injection, nephrectomy is contraindicated. Any other lesion of the opposite kidney markedly reducing its function is also a contraindication. Tuberculous nephritis of the opposite kidney is a warning sign, but not an absolute contraindication.

#### CASE REPORT

This patient had the usual diseases of childhood, influenza, small pox, and repeated attacks of tonsillitis until tonsillectomy was performed in 1931. No serious injuries. Denied venereal infection.

Occupational History: Student until 19 years of age. Was a farmer and stock raiser until 1924. Employed by the Mississippi Light and Power Company since then as a bus driver. Has followed this occupation constantly except during the intervals of acute attacks with the kidney.

Family History: Father died, accident. Mother died, cause unknown. Six brothers and sisters living and well. Three brothers dead, one of alcoholism, cause of death was not definitely known in the other two. Patient states they gradually lost weight, strength and finally died. No history of cancer, epilepsy or insanity or Bright's disease or definite history of tuberculosis nor is there any definite history of exposure to tuberculosis during the patient's life. During the World War he had an attack of influenza from which he did not recover for about six weeks (it is very probable that this prolonged recovery was due to the lightening up of an old tuberculous focus).

Present Illness: Began in 1919 with the passage of blood in the urine at which time he had an elevation of temperature. No pain associated with the attack. This subsided after a short period of rest and for the next two or three years he had similar attacks at from 8 to 12 month intervals. Since then these periodic attacks became more frequent and for the past four years has had an average of one attack every two months, some of these latter being accompanied by pain in region of left kidney transmitted to the penis. Each attack had always been ushered in by hematuria, by elevation of temperature, some sweats, and loss of weight during the attack.

He came under our observation on February 6, 1935, at which time he had a rather profuse hematuria which persisted until February 9, 1935. This

attack began February 4, 1935. He gave a history at this time of having lost five pounds in weight during past year, and for the past three years had fatigued rather easily on exertion. During 1929 for a period of two weeks he had profuse night sweats every night, but none before or since.

Physical Examination: White male, about 40 years of age, lying in bed, slightly pale. Skin shows no eruptions but is colder than normal to touch. Head: Negative. Foul odor of breath. Neck: No abnormal pulsations. No thyroid enlargement. No cervical adenitis. Chest: Medium deep, medium broad and medium long. Movement equal and expansion good. Palpation negative. Percussion negative. Auscultation: Right lung: expiration from apex to second interspace. No rales before or after expiratory cough. Breath sounds audible throughout. Left lung: No increased whispered voice sounds or prolonged expiration. No rales before or after expiratory cough. Breath sounds audible throughout. Heart: Apex beat left fifth interspace. No thrills, arrhythmias, or murmurs. No cyanosis or edema. Pulse rate 116. No sclerosis of arteries. Abdomen: No masses felt. Deep palpation in each right and left upper quadrant produces tenderness. No rigidity of muscles. G. U.: External genitalia negative. Rectum negative. Prostate gland normal in size and contour and consistency. Bones and joints: Negative. Extremities: Negative.

Cystoscopy Examination: February 13, 1935. Dr. McCall, No. 24 cystoscope passed with ease through the urethra and into the bladder. The trigone showed massive bullous edema. The area adjacent to both urinary orifices was very red and edema above referred to so extensive that entrance into the orifice was made with difficulty. No. 6 catheter passed with difficulty all along its course to the left kidney pelvis meeting obstruction at about pelvic level. No. 6 catheter passed with some difficulty to pelvis level of the right ureter. Specimen of urine sent to the laboratory for complete examination and guinea-pig inoculation. Urine from both kidneys rather turbid. Drainage from the right kidney is approximately one-half the volume of the left in the same length of time. P. S. T. appears in the right kidney in 3 minutes and in the left kidney in about 3½ minutes. See laboratory reports for examinations and P. S. T. concentration. Bilateral pyelograms made, both kidneys accommodating approximately 8 c. c. of the dye without difficulty or pain. See roentgen ray reports.

Summary: After review of the history, cystoscopic findings, and pyelograms, I do not believe there is any doubt but that this case is one of bilateral renal tuberculosis. The treatment of this case due to the equal involvement of both sides is purely that given in case of pulmonary tuberculosis, namely, rest in bed, good food, and other measures that produce healing. There is

a great deal of calcification in the pelvis of both kidneys which gives evidence of repair. In view of the history I believe this condition has been existent for many years. Patient states he first had trouble while in service, again approximately one week after discharge, and his symptoms even at that time were that of renal tuberculosis.

Progress: When patient came under our observation on February 6, 1935, he had an elevation of temperature  $99.3^{\circ}$  which subsided until February 14 when he had elevation of  $100$  degrees, on the 15th elevation  $100.3^{\circ}$ . This gradually subsided and reached normal on February 22 remaining so until March 27 when his temperature shot up to  $100$  degrees and gradually subsided, reaching normal temperature on March 30. On April 12 patient had an acute flare up with elevation of temperature of  $103.3^{\circ}$  and finally reached  $104^{\circ}$  on April 15. It gradually subsided and reached normal on April 19. Since then he has had a normal temperature until the present with the exception of one day his temperature reached  $100$  degrees. Each period of elevation of temperature was accompanied by hematuria, passage of pus and mucus in the urine. His pulse rate has rarely dropped below  $100$  since being under observation.

February 11, 1935. Cystoscopic Urine: Right Kidney: albumin 0. Microscopic examination: pus cells rare, red cells many 2-plus, occult blood positive, epithelial cells few, casts 0. Cultures: *Staphylococcus* and *B. Coli*. Animal inoculation 2-11-35. PSP-6.

Left Kidney: albumin definite trace. Microscopic examination: pus cells few, red cells many 4-plus, occult blood positive, epithelial cells few, casts 0. Cultures: *B. Coli*. Animal inoculation 2-11-35. PSP 10.

Bladder urine: Albumin negative. Microscopic: few epithelial cells. Many pus cells. T. B. stain negative.

Roentgenograms kidneys and bladder. There are numerous irregular calcified nodules overlying both kidneys shadows and apparently are multiple stones scattered throughout the major and minor calices. (Feb. 7, 1935.)

Pyelogram February 11, 1935. Bilateral pyelogram shows distortion of both major and minor calyces, pelvis and ureter. There is irregularity and feathering of all the calyces corresponding to the calcified areas and others independent of the calcified areas. The ureter and pelvis show irregular negative filling defects which appear to be projections from the wall, such as small papillomatous masses would produce. Impression is that this is extensive tuberculosis involving both kidneys and ureters with calcification and irregular bullous edema.

Stereo chest February 18, 1935 negative.

Repeated centrifuged specimens of urine 2300 revolutions per min. for 15 minutes have been

negative for tubercle bacilli. Guinea pig inoculation negative. A series of cultures from the urine for tubercle bacilli have proven negative. Wassermann negative.

#### CONCLUSIONS

1. Let us again emphasize the necessity for complete urological study of all cases of tuberculosis with urinary symptoms.

2. It is just as important to make repeated examinations of centrifuged specimens of urine during the course of treatment of any case of tuberculosis for very often renal tuberculosis may reach a rather advanced stage before producing symptoms.

3. In any case complaining of frequency and hematuria diligent search for tuberculous foci in every part of the body should be made as well as of the urogenital tract.

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#### PLEA FOR BETTER OBSTETRICS\*

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In years gone by, years before this age of hustle and hurry, it was stated that "labor was a normal physiological process;" but now we are forced to look upon it as a grave surgical problem.

There is bound to be some cause for this change other than the decadence of the race due to living a life of ease or improper use of foods and drink. Of course, there always has and always will be unavoidable complications in childbirth which mitigate against the life of child and mother.

Anemia, hypertension, tuberculosis, diabetes, kidney and heart diseases present grave complications for the mother. "It is claimed that 55 per cent of a large number of cases of sepsis occurred in normal deliveries and the important conclusion was reached" that "neither improvement in ante-natal work nor increased dexterity or judgment in obstetric operations will have any considerable effect upon the moiety of the fatalities; the social status of the patient and

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nature of the environment during pregnancy have little or no influence on the incidence of sepsis . . . 50 per cent of puerperal sepsis mortality occurs under clinical normal conditions and is quite unpreventable." (Current Medical Digest, January, 1935).

But notwithstanding this, our death rate is entirely too high. True, in some sections it is better than in others; but as a whole, our death rate compares unfavorably with other countries. United States mortality rate per 1,000 live births is 6.4, whereas France has 2.5, Italy 2.8, Norway 2.6, Sweden 2.7, Czechoslovakia 4.3, and the only countries close to us, England and Wales, have 5.4. Northern Ireland is the same as ours; and in 1933, Chile had 8.4 and Scotland 6.3. Of course, the claim is made that the statistics of other countries differ from ours and if calculated on the same United States method of assignment, it would increase the death rate of France to 2.8, England and Wales to 6.4, Esthonia to 4.0, Italy to 2.9, Norway and Sweden to 3.1.

Dr. Elizabeth C. Tandy writes under "Comparability of Maternal Rates in U. S. and Foreign Countries," "Differences in method of assignment are sufficient to explain the high maternity rate in the U. S. as compared to other countries. The official figure for the U. S. . . . remains high no matter what method of assignment is used."

Of special interest to us are the statistics of

	MATERNAL DEATH RATES PER 1,000 LIVE BIRTHS		
		White	Negro
1920	8.5	5.5	11.6
1921	8.0	5.9	12.2
1922	6.8	5.0	8.5
1923	7.1	4.9	9.0
1924	8.9	6.0	11.8
1925	9.1	6.2	11.7
1926	7.3	6.0	8.5
1927	8.3	5.5	11.0
1928	8.2	6.6	9.8
1929	8.5	6.6	10.2
1930	9.7	7.2	12.0
1931	7.4	5.9	8.9
1932	5.7	4.6	6.7
1933	6.8	5.5	7.9

our own State of Mississippi from 1920 to 1933. This report from the Bureau of Vital Statistics shows some improvement, that is 8.5 in 1920 to 6.8 in 1933.

This report is bad; but, having been local registrar of births and deaths for many years, I feel certain that if all births were reported, Mississippi would have a reduced mortality. There are men in my registration district who will never report a birth unless the mother died and no burial can take place without a burial permit; and they are afraid to send in death certificates of the mothers without the birth certificates of the babies. As this occurs in one district, it likewise does in many; and when statistics are computed on 1,000 live and still births, our statistics are not as reliable as they should be. I would here urge all doctors, no matter how busy they may be, to spare a few minutes after attending an obstetrical case to fill out the birth certificate. This will not only help to clarify statistics; but it will supply the baby with the data to prove at least its legitimacy.

In clearing up statistics, the Journal of the American Medical Association, March 16, 1935, has a very enlightening editorial on this subject. "The rates for the U. S. were reclassified on the same basis of assignment of cause as that made in each of the foreign countries. When this was done and a comparison made, the U. S. rate was still in excess of the official rates of the respective countries with one exception (Scotland) . . . The best position which the United States could have achieved was fifth from the highest, when its rate was determined under the system of Norway and of England and Wales."

Dr. Fred L. Adair, Chicago, says, "Furthermore, there are often more causes than one to which death may be attributed . . . It is for this reason among others that there has been so much discussion relative to the exact position which the United States occupies, with reference to maternal mortality in the family of nations . . . In most instances the methods used in other countries lower our death rates from puerperal causes, but not sufficiently to remove the United States from its position near the

top of the list of those having the highest maternal mortality rates."

Further on, Dr. Adair makes some pertinent remarks, "There has been much in favor of hospitalization of maternity cases from the points of view of both the patient and the physician. In many instances, the institutions were not planned and equipped for the adequate care of these patients. The personnel, both nurses and doctors, have too frequently had insufficient education and training in this field, as a rule through no fault of their own."

In Illinois, as in Mississippi, the colored mortality is greater than the white; but in Georgia, or rather Atlanta, Dr. Jos. R. McCord states, "That it is possible to sell good obstetric care to ignorant colored women seems to be proven by this report. Of 1,721 women delivered during the year, 1,602 had visited the pre-natal clinic one or more times.

"We cannot agree with the opinion that has been expressed; namely, that colored women are better surgical and obstetrical risks than white women. On the contrary, we think they are poorer risks.

"It would seem, where no special environment or unusual equipment, a mortality rate of 1.8 per 1,000 live births was obtained, that the conservatism, largely responsible, is perhaps worthy of emulation."

That this problem is not only for the profession but is also engaging the attention of the thinking public, is evidenced by the many articles appearing in the day press. "Time," December 17, 1934, under Medicine, quotes from a report of Dr. Wm. R. Nicholson, "Philadelphia midwives delivered 95,151 women in the past 20 years and lost only 74 . . . During the past three years, local obstetricians delivered 99,581 women and lost 717."

This, of course, is a drastic criticism of the medical profession in that locality; but let us remember that the midwife is not allowed to use forceps, do versions, or treat placenta previa; and in a great majority of cases, women attended by midwives are exhausted after days of hard labor; and consequently, when moved to a hospital or treated by a physician, are poor obstetrical or surgical risks. And the death

in this case is charged against the doctor, whereas, it is in reality the fault of the midwife.

That obstetrics has made a phenomenal improvement in the past few years, no one will gainsay.

The large hospitals and schools are giving attention to this work whereas, not so many years ago, obstetrics was taught by the professor of anatomy; and the course was optional with the student. Today most of the schools have professors of obstetrics; and a few still combine obstetrics with gynecology.

What then is required to change our high mortality rate? (1) Education; (2) proper prenatal examination, (3) less hurry.

Some states, especially New Jersey and Virginia, are having clinics frequently throughout the state. The Educational Committee in New Jersey is presenting the idea of better obstetrics to the public as well as to the physicians.

In a paper Dr. Arthur W. Bingham, Chairman of the Maternal Welfare Committee, State Medical Society of New Jersey, writes, "During the existence of the Maternal Welfare Commission, the uncorrected maternal mortality for Essex County, according to State Board of Health, has been reduced from 6.9 to 4.4 per 1,000 live births; and in Newark from 7.4 to 4.5 per 1,000 live births."

One of the requirements in New Jersey is consultations in all the following cases: (a) all prolonged labors (24 hours), (b) caesarian sections, (c) breech presentations, unless very premature, (d) difficult forceps cases or versions, (e) occiput posterior cases requiring forceps or version, (f) other complicated cases, eclampsia, placenta previa, etc.

Dr. J. Allison Hodges, president of the Medical Society of Virginia, in writing of the educational advantages to the physician, both white and colored, rendered by the clinics throughout the state, states, "More than three hundred physicians have enrolled in twenty-five classes; and their attendance has averaged higher than 75 per cent. In scores of written comments upon the courses, in reply to inquiries by the executive secretary, only six physicians have written that they were not beneficial to them."



This same course is being carried out in Mississippi, only to a less degree. To be beneficial, this course should be given at least once a year.

I am just in receipt of a communication from the Committee on Postgraduate Medical Education in Mississippi which states that pre-natal care is absolutely necessary and, besides, a good history and thorough physical examination. Basal metabolism, Wassermann, blood picture, frequent microscopical examinations of the urine, with measurements of the intake and output of fluids, are necessary. Blood pressure and weight, with proper diet, are absolutely necessary. The weight does not so much indicate excess in carbohydrates and other fat forming foods as it does the retention of the fluids in the tissues. We have long since gotten away from the old adage that a pregnant woman must eat for two.

Finally, do not hurry. Of course, in our state there are few, if any, devoting all their time to obstetrics; and the deliveries are done by the general practitioner, who already has more work to do than he can reasonably get through with; so the sooner he completes his case, the sooner he can make the many visits awaiting his return; and right here is where our high mortality comes in. The early and excessive use of pituitary extract may shorten the labor, as will also the early application of forceps; but therein lies the danger both to mother and child. These are beneficial remedies but do not resort to them except when necessary for the saving of life.

How often have we seen an occiput posterior converted into an anterior with spontaneous delivery; when the necessary traumatism resulting from a forcible delivery may jeopardize the life of the mother. Watchful waiting is undoubtedly the solution of many of our problems.

Watch pulse and blood pressure; keep a record of the foetal heart; and use your powerful oxytocics only after the delivery of the child.

I cannot pass over without some comment on the excessive use of analgesics and anesthetics which are so commonly used today. It is our duty to give the mother all relief possible; but

we can easily overdo this, and occasionally we have another unnecessary maternal death for which to account.

## THE INCIDENCE AND CLINICAL MANIFESTATIONS OF LYMPHO-GRANULOMA INGUINALE IN NEW ORLEANS\*

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and

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NEW ORLEANS

Stannus' comment that inexperience with a disease may account for the absence of recorded observations of it is peculiarly applicable to lymphogranuloma inguinale in New Orleans. Prior to our introduction of the Frei test in Charity Hospital in May, 1934, not a single case of this condition had been observed in that institution. Within the next six months, we were able to recognize 154 cases, covering practically all of its manifestations. This, of course, is about what would be expected in the light of available data. No preference for certain climates can be inferred from the previous studies, which merely indicate that the disease has been recognized wherever medical education develops an interest in such studies, while the fact that nearly all the reported cases have been observed in the larger cities is the logical corollary of that interest and by no means indicates that it is not as frequent in rural districts. On the other hand, a high incidence of the disease is to be expected in such a city as New Orleans and such an institution

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‡It must be emphasized at this point that lymphogranuloma inguinale should not be confused with granuloma venereum (granuloma inguinale), which involves not the lymphatic system but the skin and subcutaneous tissues of the pudenda, groin and perineum, and which is diagnosed by the finding of Donovan bodies.

as Charity Hospital, where negroes form a large proportion of the population, for the frequent incidence of the condition in the colored race has already been pointed out by other students of the disease, none of whom, however, seem to have observed as many cases as it has been our opportunity to study.

#### GENERAL CONSIDERATION

Lymphogranuloma inguinale<sup>‡</sup>, which has also been termed the fourth venereal disease (Cole), the sixth venereal disease (Stannus), and lymphopathia venereum (Sulzberger and Wiese), is caused by a filtrable virus which can be transmitted to white mice, certain species of monkeys, and other experimental animals. Following the technic of Hellerstrom and Wassén, and of Levaditi and his co-workers, we were able to isolate the virus in seven cases of acute inguinal buboes in patients with positive Frei reactions, all of whom were life-long residents of Louisiana. In each of these cases intracerebral inoculation of white mice or monkeys (common marmosets) produced the same fatal meningo-encephalitis described by the Continental investigators. Furthermore, the virus obtained from the brain emulsions of infected animals could be transmitted to other animals of the same or another species, and up to the present time strain L20 has been transmitted in our laboratory through fifteen passages (v. Haam and Lichtenstein). Antigens prepared from 20 per cent sterile brain emulsions of these animals by the Frei technic apparently possess the same diagnostic value as those obtained from the pus of acute inguinal buboes in human cases of lymphogranuloma inguinale (Lichtenstein and v. Haam). Indeed, we found in our clinical work that the antigen prepared from the infected monkey brain not only affords a large supply of material for diagnosis, but is actually more stable and can be more readily standardized than the antigen prepared from human cases.

Lymphogranuloma inguinale has been recognized in the male, at least, for seventy-five years or more, as an unusual form of venereal infection occurring not only in the

tropics among natives and sailors, but also in the slum districts of large cities located in temperate climates. Probably because it is often difficult to distinguish clinically this type of infection from the type of inguinal adenitis secondary to syphilis or chancroidal infection, the early case reports, such as those of Klotz in 1890, did not attract the attention they merited. Durand, Nicholas and Favre (1913) first described a specific type of glandular suppuration occurring in inguinal buboes and presenting a definite histopathologic picture. They termed the condition "lymphogranulomatose inguinale subaigue," and while they shrewdly suspected the venereal nature of the disease, they were apparently unaware of its manifestations in the female. For that matter, many writers today seem unaware of the protean nature of this disease and have failed to recognize it as the etiologic factor in rectal stricture and in certain granulomas of the pudenda.

The interest of the medical world in lymphogranuloma inguinale was tremendously stimulated by Frei's discovery in 1925 of the specific skin test which bears his name and which affords a simple and reliable method of diagnosis. The intracutaneous injection of 0.1 cc. of sterile antigen in individuals who are or have been afflicted with this disease produces an indurated inflammatory area, 0.5 cm. or more in diameter, which reaches its maximal development within 48 hours. The specific skin reactivity persists indefinitely and it has been observed as long as 30 to 40 years after the clinical symptoms have subsided (Cole). This test, like the tuberculin reaction of v. Pirquet, indicates not necessarily an active disease process but rather that the patient at some time or other has been infected with the causative virus. It must be borne in mind, therefore, when the test is employed, that a positive reaction does not exclude the posma inguinale long before the present lesion developed.

The specificity of the Frei reaction in the diagnosis of lymphogranuloma inguinale has

been confirmed in the ten years that have elapsed since its introduction by a great number of observers. The method of identifying a disease solely on the basis of skin reactivity has naturally met with criticism, but experimental work has justified Frei's claims. Findlay, for instance, fully confirmed the clinical concept of the identity of climatic bubo and inguinal adenitis (lymphogranuloma inguinale) based upon the diagnostic skin reaction of Frei. The former lesion was first described by Trousseau in 1865 among the Creoles of the islands of Reunion and Maurice, and was subsequently noted rather frequently among sailors who had had intercourse with native women in tropical seaports. It is a suppurative lymphadenitis similar to the lesion described by Nicholas and Favre on the Continent, and the identity of both lesions was suggested by Frei, who found that an antigen prepared from one lesion gave a positive reaction in the other. Findlay's experiments showed that the bacteria-free filtrate of pus or of lymph gland emulsion in both diseases produces in susceptible animals the same characteristic fatal meningo-encephalitis.

In the same way, it has been possible to recognize by this test as other manifestations of lymphogranuloma inguinale certain hitherto ill-defined chronic ulcerative and hypertrophic lesions of the female genitalia previously attributed for the most part to syphilis. Finally, the observations of Frei and Koppel in 1928 identified lymphogranuloma inguinale as the causative factor in rectal stricture. Since 1928 considerable evidence, both clinical and experimental, has been adduced to show that lymphogranuloma inguinale is responsible for the overwhelming majority of inflammatory strictures of the rectum, and that syphilis, gonorrhea and tuberculosis, contrary to what was taught for many years, are of distinctly minor importance.

The disease can no longer be regarded as rare in the United States. In 1924 Hansmann described four cases of "non-tubercular granulomatous lymphadenitis" in which the clinical and pathological picture strongly sug-

gests that he was dealing with lymphogranuloma inguinale, and it is interesting to note that he attempted to differentiate these cases from cases of climatic bubo described from time to time previously, particularly by naval medical officers. De Wolf and Van Cleve, in 1932, published the first large series of cases in the United States in which the Frei test had been used for diagnosis, their report covering 1010 cases, in 58 of which the test was positive; in the latter group a positive story of the disease could be elicited. The Frei-positive cases reported in this country up to this writing are shown in Table I, which does not include the cases of climatic bubo published from the various Marine Hospitals, because, although their etiology is now entirely apparent, they were described before the introduction of the Frei reaction (Wilmoth, Whitmore et al). For the same reason the table does not include the unconfirmed cases of lymphogranuloma inguinale described in the United States by Barber and Coogle; Cannon; Gross; Ives and Katz; Hillsman, Wilshusen and Zimmerman; Weeks; O'Reilly, Delprat and Stowe.

Since July, 1934, the Frei test has been used routinely in Charity Hospital on all patients who came under our observation suffering with inguinal buboes, chronic ulcerative or hypertrophic lesions of the vulva, granulomatous lesions of the cervix, and inflammatory stricture of the rectum, these being the most frequent manifestations of the disease. We have been able, as the result of this test, to establish the fact that lymphogranuloma inguinale is a widely prevalent disease in New Orleans, particularly among the colored population, and there seems no reason to doubt that it was present in the city long before the introduction of the Frei reaction for diagnosis. With the idea of determining this point, we analyzed the available hospital records between the years 1911 and 1933 of all cases filed under the diagnosis of elephantiasis of the vulva and rectal stricture. Prior to 1911 there are no recorded cases of either condition. Inguinal adenitis was not included in this

analysis, because of the obvious difficulty of differential diagnosis without the requisite laboratory data.

The records include 40 cases of elephantiasis of the vulva and 1285 of rectal stricture, not more than 10 per cent of the latter being postoperative or obviously neoplastic. The detailed investigation which we had hoped to make was impossible because the available data, particularly in the earlier cases, were frequently too incomplete and fragmentary to permit it, but it seems fair to say that lymphogranuloma inguinale could be justifiably suspected in at least 20 per cent in the cases of elephantiasis of the vulva, on the basis of associated ano-rectal lesions or of healed inguinal adenitis, and in most of the cases of rectal stricture, because of their occurrence in negro females and their association with pudendal lesions.

This communication is based upon a detailed analysis of 154 cases of lymphogranuloma inguinale, 86 of which occurred in the male and 68 in the female. Because of the different manifestations of the diseases in each sex, the lesions in the male and female will be considered separately.

#### LESIONS IN THE MALE

Eighty-six cases of lymphogranuloma inguinale were observed in the male. Eighteen patients were between 18 and 20 years old, while 50 were observed between 20 and 30, the period of greatest sexual activity. The oldest patient with an inguinal bubo was 58. Only eleven patients, 13 per cent, were white.

The characteristic lesion of the disease in the male is the inguinal bubo, which is preceded, however, by a small primary lesion, herpetic, ulcerative or papular in character, which appears at the site of infection by the virus, and which is likely to be overlooked by the patient. In 11 cases in this series, however, a history was obtained of an evanescent minute papular or ulcerative lesion on the prepuce or the glans penis, and 10 of these lesions were actually observed in the healing crusted stage, although no biopsies, unfortunately, could be obtained. In three

other cases a transient urethritis, without antecedent gonorrhea, suggested the possibility of a primary urethral lesion.

Approximately half the patients sought treatment in the acute stage of their illness, within a few days to three weeks after the appearance of the bubo. Twenty-five others presented the subacute stage of the disease, in which constitutional symptoms are no longer present, and had had their buboes from three weeks to three months. The chronic stage of the condition was demonstrated in eight patients who had had suppurating sinuses for several months or even years, and nine patients who entered the hospital for treatment of other venereal diseases showed inguinal scars indicating an old healed infection.

The clinical symptoms of inguinal bubo and the physical appearance of the lesion naturally vary with the stage of the disease and the virulence of the virus. At one extreme is the large, painful, tender bubo of several days duration, which is undergoing rapid suppuration; at the other extreme is the indolent bubo without constitutional symptoms, which gives rise to a positive Frei reaction only after three or four weeks and which persists for several months without much tendency to suppuration.

In the acute cases, particularly when the infection was severe, the inguinal glands were noted to be so large, swollen and painful that locomotion was frequently difficult. Bilateral involvement was observed in 19 cases. In addition to the local symptoms of the acute condition, more or less severe constitutional symptoms were manifest in many patients during the early stage of the infection. Fever, ranging to 103° F., accompanied the onset of the inguinal adenitis in eleven cases, while headache, weakness, anorexia and profuse sweating were frequently noted, and sometimes lasted for several days or even several weeks. In some instances the intensity of the symptoms were out of all proportion to the local manifestations, and seemed, if one reasons by analogy from experimental inoculation of animals, to coincide with the period of inva-



sion and dissemination of the virus within the body.

The acute bubo is a firm, hard mass involving the various groups of inguinal lymph nodes. At first this mass is not attached to the skin and subcutaneous tissue, but within a few weeks the glands tend to become fluctuant and adherent to the overlying skin, which at this stage is discolored, dark and violaceous ("blue-balls"). It is about this time that the Frei reaction becomes positive. The majority of the buboes which we observed reached this fluctuant stage, only a small number regressing spontaneously, usually after a period of several weeks.

In cases of fluctuation, surgical treatment seems indicated. Incision and drainage was therefore done in 28 of these cases and excision (adenectomy) of the swollen glands in eight. In 11 untreated cases the suppurating buboes perforated spontaneously through the skin, with the formation of multiples sinuses draining viscid, grayish-yellow pus. These chronic cases are characterized by a tendency toward delayed healing, and the draining sinuses may persist for months or even years, while inguinal scars remain indefinitely as an indication of the previous infection.

The possibility of recurrent infection with the virus of lymphogranuloma inguinale seems clear from the histories of four patients in this group. They told stories of previous inguinal buboes, without accompanying penile sores, one, four, eight and sixteen years respectively before the onset of the present adenitis, with which, also, penile lesions were not associated. From these observations it would appear that infection with lymphogranuloma inguinale does not always confer permanent immunity and that reinfection with the virus is quite possible. Recrudescence or exacerbation of subsiding acute buboes was fairly common in the cases which we studied.

Multiple venereal diseases were quite frequent in these patients, as would be expected in the social stratum in which lymphogranu-

loma inguinale occurs. In many instances the positive Wassermann reaction indicated a syphilitic infection, while eight patients had gonorrheal urethritis and nine a complicating chancroidal infection of the penis, which appeared after the bubo. Two patients, in addition to inguinal buboes, showed ulcerating lesions of the groin resembling granuloma venereum.

The excised glands showed microscopically the typical changes described by Nicholas and Favre and others. The salient feature, i.e., miliary abscesses surrounded by a wall of endothelial cells, was constant in our biopsy material. In addition, there was usually a peradenitis with fibrosis.

#### LESIONS IN THE FEMALE

Rectal stricture, which was observed in three-quarters of the 68 female patients, is the most important manifestation of lymphogranuloma inguinale in that sex, and has recently been described in detail by one of us (Lichtenstein). Other lesions in the female included, on the basis of the classification recently proposed by Stammus, eight cases of inguinal bubo, in three of which a small crusted lesion or shallow ulceration on the external genitalia apparently represented the primary lesion, and eleven cases of esthiomene and chronic elephantiasis of the pudenda without rectal stricture.

The age range in the female group was from 14 to 60 years. The greatest incidence, naturally, was in the third decade, the period of greatest sexual activity, but approximately 60 per cent of the patients were beyond that age. All but one of the 68 cases occurred in colored women, and this predilection of the disease for the negro must be regarded, as we have already pointed out, as quite characteristic. The duration of symptoms varied with the type of lesion present. In cases of inguinal bubo the suppuration and pain necessitate early medical consultation, and such patients were observed from three weeks to six months after the onset of symptoms. In cases of esthiomene and elephantiasis of the vulva no patients were seen before the lapse of six months, and in some

instances they were observed as late as two years after the onset of symptoms. Frequently they had received treatment by their local physicians before they applied to the hospital. In cases of rectal stricture, unless secondary proctitis or a very tight stricture induces the patient to seek earlier treatment, several years may elapse before hospitalization is sought.

The symptomatology and clinical course in the cases with inguinal buboes did not differ materially from the cases observed in males. The ulcerative lesions of the vulva in esthiomene were usually painful and tender to palpation, findings which help to distinguish them clinically from the vulvar lesions of granuloma venereum. The latter, moreover, frequently extend into the groin or over the perineum, while the lesions of lymphogranuloma inguinale are limited to the pudenda and involve either the external or internal labia. The area of ulceration tends to be shallow and irregular, without demarcation (Fig. 1).



FIG. 1. Ulcerative lesion of labia minora of seven months duration. Positive Frei reaction, negative Wassermann reaction.

It is often very difficult without the use of the Frei test to distinguish ulcerative lesions due to lymphogranuloma inguinale from those caused by syphilis, but with it the diagnosis is immediately evident. The test is equally valuable in differentiating chronic ulcerative or hypertrophic vulvar lesions due to lymphogranuloma inguinale from those caused by granuloma venereum. Chronic hypertrophic lesions may involve one or both labia, and occasionally the clitoris (Fig. 2).

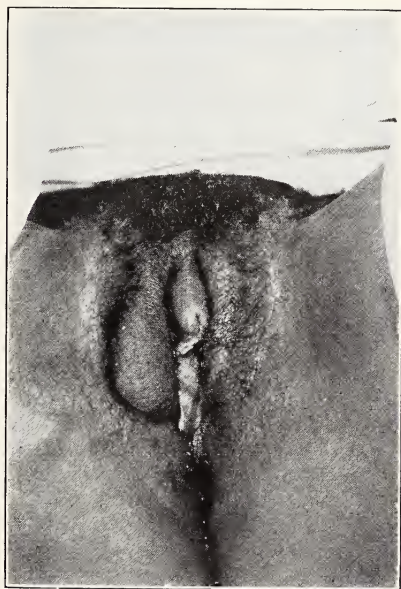


FIG. 2. Hypertrophic lesion of vulva (elephantiasis) of ten months duration, involving right labium and clitoris, associated with ulceration of labia minora. Positive Frei reaction.

The labia may be thickened to firm rolls but are not as firm as in lesions due to granuloma venereum. Occasionally the hypertrophic pudenda may be pedunculated or pendulous and the skin, while slightly thickened, and edematous, is less indurated than in lesions due to granuloma venereum.

The symptoms of inflammatory stricture of the rectum due to lymphogranuloma inguinale are best classified in five groups, namely, low-grade obstruction, proctitis, associated lesions, malnutrition, and consti-

tutional symptoms. Chronic constipation and painful straining at stool, often for a period of several years, were noted in nearly all our 49 cases, and approximately 57 per cent of the patients gave a history of a sanguino-purulent or frankly purulent discharge ("corruption"), particularly when straining at stool, which is characteristic of proctitis. Proctitis of long duration usually affects the general health, and in patients so afflicted malnutrition, loss of weight and secondary anemia were frequent findings.

The stricture, usually annular in type, is situated in 80 per cent of all cases within 4 to 6 cm. above the anus, and varies in degree from a mild stenosis to a firm construction which will not admit the index finger. The rectum, in advanced cases, may be exquisitely tender on palpation. There is invariably present also some degree of induration of the lowermost rectal segment, and the thick, irregular, band-like or corrugated feel of the lumen below the stricture one learns by ex-

perience to regard as very characteristic. Fistulae-in-ano and anal tags (so-called "hemorrhoids") are frequent associated lesions, especially when proctitis is present. They were noted in about a third of these cases, while the complete genito-ano-rectal syndrome, i.e., rectal stricture associated with pudendal lesions, was observed in four (Fig. 3j).

The predilection of inflammatory stricture of the rectum for females, and particularly negro females, the simultaneous presence of vulvar lesions, or the presence of inguinal scars indicating old healed buboes are all features which help one to make a correct diagnosis; moreover rectal stricture, like the other manifestations of the disease in the female, gives a positive Frei reaction.

Pathologic material obtained at biopsy, surgical resection and necropsy shows a type of chronic inflammation exhibiting certain features of lymphatic involvement which are apparently common to all lesions of lymphogranuloma inguinale and which occur in the pudenda as well as in the rectum. The inguinal bubo, naturally, shows the same histologic picture as does the similar lesion in the male. The hypertrophic and ulcerative lesions of esthiomene are characterized by a peri-lymphangitis and a thrombo-endo-lymphangitis, with marked dilatation of the lymph vessels. The paravascular infiltration with small round cells around the lymphatics accompanying the larger blood vessels may be differentiated without great difficulty from the perivascular infiltration of syphilis.

The histologic features of inflammatory stricture of the rectum have been clarified by the able pathological researches of Barthels and Biberstein, and may be summarized as follows: destruction and ulceration of the mucosa; infiltration of the muscularis by miliary accumulations of lymphocytes and plasma cells; dilatation of the lymphatics with peri-lymphangitis and endo-lymphangitis. The indurated periproctitic fat and connective tissue show paravascular and perivascular infiltration. Biopsy, it should be emphasized, scarcely enables one to make a diagnosis more definite than chronic inflam-



FIG.3. Complete genito-ano-rectal syndrome of three years duration. Hypertrophy of right labium, fistulae-in-ano and perianal scarring, associated with rectal stricture. Positive Frei reaction.



mation, even when it causes one to suspect lymphogranuloma inguinale, and it should always, therefore, be supplemented by the Frei test.

Syphilis and pellagra were the most frequent associated diseases in this group of cases. Fifteen patients, approximately 20 per cent, had positive Wassermann reactions, which is probably less than the number of cases of syphilis since several patients with negative Wasserman reactions had a history of previous antiluetic therapy. The incidence of syphilis, however, is probably no higher in this group than it would be in a similar group of negro women under treatment for some other venereal disease such as chancroid or gonorrhea.

Seven patients with rectal stricture, 14 per cent of the total number, also suffered from pellagra, and the association seems too frequent to be set down to mere coincidence. Since the symptoms of rectal stricture definitely antedated the onset of dermatitis in most cases, the logical conclusion is that rectal stricture predisposes to pellagra. The symptoms of the latter condition tend to clear up with appropriate diet and with routine treatment of the rectal stricture, but there is a notable tendency toward recurrence, and the prognosis in such cases should be guarded.

#### SUMMARY

1. This paper is an analysis of 154 cases of lymphogranuloma inguinale diagnosed with the Frei reaction and observed in Charity Hospital in New Orleans over a period of six months.

2. The characteristic lesion in the male is the inguinal bubo, and in the female, in order of frequency, inflammatory rectal stricture, esthiomene and chronic elephantiasis of the vulva, and inguinal bubo.

3. Seven local strains of the causative virus of the disease were isolated from acute inguinal buboes and successfully transmitted to experimental animals.

4. An analysis of the Charity Hospital records covering rectal stricture and elephantiasis of the vulva from 1911 to 1933 indicates that lymphogranuloma inguinale, al-

though unrecognized, has been endemic in New Orleans for many years.

5. The large number of cases observed over a short period indicates that the disease is widespread in New Orleans at the present time, particularly among the negro population.

6. The first step in the control of this venereal disease is the recognition of the condition and the comprehension of its various manifestations by the whole medical profession.

TABLE I

City	State	Year	Number of	
			Author	Cases
New York	New York	1931	Wiese	1
		1931	Bloom	7
Philadelphia	Pennsylvania	1933	Martin	20
Cleveland	Ohio	1932	de Wolf	58
			van Cleve	
Cincinnati	Ohio	1934	Lee	14
			Staley	
Indianapolis	Indiana	1934	Dalton	24
Chicago	Illinois	1932	Amtman	3
			Pilot	
		1934	Wien	16
			Perlstein	
Lexington	Kentucky	1934	Lash	1
			Dorne	1
			Zakon	
			Alley	22
Kansas City	Missouri	1934	Hall	1
			Stookey	
Fort Smith	Arkansas	1951	Goldstein	2
			Byars	
San Antonio	Texas	1934	Lehmann	7
			Pipkin	
Omaha	Nebraska	1933	Tomlinson	3
			Cameron	
San Francisco	California	1934	Templeton	1
			Smith	

#### BIBLIOGRAPHY

- Alley, R. C.: Lymphopathia venerea. *Kentucky Med. J.*, 32:250-251, 1934.
- Amtmann, L. and Pilot, J.: Lymphogranuloma inguinale. *Arch. Derm. and Syph.*, 26:568-578, 1932.
- Barber, M. A. and Coogle, C. P.: Some cases of nontuberculous granulomatous lymphadenitis in Mississippi. *Publ. Health Rep.*, 42:1306-1311, 1927.
- Bloom, D.: Stricture of the rectum due to lymphogranuloma inguinale. *Surg. Gyn. Obst.*, 58:827-840, 1934.
- Cannon, A. B.: Lymphogranuloma inguinale. *Arch. Derm. and Syph.*, 24:679, 1931.
- Cole, H. N.: Lymphogranuloma inguinale, the fourth venereal disease. *J. A. M. A.*, 101:1069-1076, 1933.
- Dalton, J. B.: Lymphogranuloma inguinale. *J. Indiana Med. Ass.*, 27:158-160, 1934.
- Dorne, M. and Zakon, S.: Esthiomene; a late manifestation of lymphogranuloma inguinale. *Arch. Derm. and Syph.*, 30:831-836, 1934.



- Durand, M., Nicholas, J. and Favre, M.: Lymphogranulomatose inguinale subaiguë d'origine Genitale. Probable etc., Bull. Soc. Med. des Hôp., 35:274, 1937.
- Findlay, G. M.: Experiments on the transmission of the virus of climatic bubo (Lymphogranuloma inguinale) to animals. Trans. Roy. Soc. Trop. Med., 27:35-65, 1933.
- Frei, W.: Eine Neue Hautreaktion Bei Lymphogranuloma Inguinale. Klin. Wochenschr. 4:2148, 1925.
- Frei, W.: Zur Identität zwischen Lymphogranuloma Inguinale und Klimatischen Bubonen. Klin. Woch. 6:2042, 1927.
- Frei, W. and Koppel, A.: Ulcus vulvae chronicum Elephantasticum (Esthiomene) und Sogennaute Syphilome ano-rectal. Klin. Woch. 7:2331, 1928.
- Goldstein, B. W. and Byars, L. T.: Lymphogranuloma inguinale. J. Ark. Med. Soc., 30:192-193, 1934.
- Gross, P.: Lymphogranuloma inguinale. Arch. Derm. and Syph., 21:876, 1930.
- Haam, E. V. and Lichtenstein, L.: Studies on animal transmission of lymphogranuloma inguinale. Proc. Soc. Exp. Biol. and Med. 32:849, 1935.
- Hall, T. B. and Stookey, P. F.: Lymphogranuloma inguinale. J. Kansas Med. Soc., 35:200-211, 1934.
- Hansmann, G. H.: Nontuberculous granulomatous lymphadenitis. Surg. Gyn. Obs., 39:72-82, 1924.
- Hellerström, S. and Wassen, E.: Meningo-encephalitische Veränderungen bei Affen etc. Verh. 8th. Internat. Kong. f. Derm. and Syph. Copenhagen 1930, Zeitschr. f. Immun. 73:110, 1931.
- Hillsman, J. A., Wilshusen, H. F., and Zimmerman, H. M.: Lymphogranuloma inguinale. Arch. Derm. and Syph., 18:383, 1928.
- Ives, G. and Katz, S.: Lymphogranuloma inguinale. J. Missouri Med. Ass. 30:107-111, 1933.
- Klotz, H. G.: Ueber die Entwicklung der sogenannten strumösen Bubonen. Berl. Klin. Woch. 27:132, 153, 175, 1890.
- Lee, H., and Staley, R. W.: Inflammatory Strictures of the Rectum. Ann. Surg. 100:486-495, 1934.
- Lehmann, C. F. and Pipkin, J. L.: Lymphopathia venerea. Texas State J. of Med. 29:192-198, 1933.
- Levaditi, C., Ravaut, P., Lepine, P. and Schoen, R.: Etude Etiologique et pathogénique de la Maladie de Nicholas et Favre. Ann. Inst. Pasteur, 48:27-88, 1932.
- Lichtenstein, L.: Rectal stricture. A clinical analysis of 58 cases with observations on 154 Frei-positive cases of lymphogranuloma inguinale. (In Press).
- Lichtenstein, L. and Haam, E. V.: Usefulness of organ emulsions of infected animals for the diagnosis of lymphogranuloma inguinale. Proc. Soc. Exp. Biol. and Med. 32:846, 1935.
- Martin, C. P.: Stricture of the rectum. J. A. M. A. 101:1550-1552, 1933.
- Stannus, H. S.: A Sixth Venereal Disease. Baltimore, W. Wood Co., 1933. Poradeno-lymphitis. Trop. Dis. Bull. 31:437-454, 1934.
- Sulzberger, M. B. and Wiese, F.: Lymphopathia venereum. J. A. M. A., 99:1407-1410, 1932.
- Templeton, H. J. and Smith, D.: Lymphogranuloma inguinale. Calif. and West. Med. J., 41:42, 1934.
- Tomlinson, C. C. and Cameron, O. J.: Lymphogranuloma inguinale. Arch. Derm. and Syph. 27:778-783, 1933.
- Trousseau, A.: De L'Adénie. Clin. Med. de l'Hôtel Dieu de Paris, 3:581, 1865.
- Weeks, A., O'Reilly, B. C. N., Delprat, G. D. and Stowe, W. P.: Subacute lymphogranuloma inguinale. Arch. of Surg. 29:628-632, 1934.
- Whitmore, W. H.: Climatic bubo. United States Naval Bull. 25:89-102, 1927.
- Wien, M. S., and Perlstein, M. O.: Lymphogranuloma inguinale. Med. Record, 139:288-291, 1934.
- Wiese, F.: Lymphogranuloma inguinale. Arch. Derm. and Syph. 24:147, 1931.
- Wilmoth, C. L.: Climatic bubo. South. Med. J. 21:108-113, 1928. Subacute inguinal lymphogranulomatosis. J. Trop. Med. 31:153, 1928.
- de Wolf, H. F. and van Cleve, I. V.: Lymphogranuloma inguinale. J. A. M. A. 99:1065-1070, 1932.

## DISCUSSION

Dr. Max M. Green: My experience with lymphogranuloma inguinale is limited wholly to the patients of the Colored Male Clinic of Charity Hospital. These negro men usually come in complaining of bubo after the primary lesion has disappeared. Most of these patients give a history of a primary lesion, but state that it has bothered them very little. Quite a number will wait until after the lesion is present for some time and is ready to suppurate, before they come in with their trouble. There are a number of different lesions that may complicate the picture; namely, chancroid, syphilis or tuberculous adenitis. The chancroid usually comes on rapidly and is very painful, presenting a definitely outlined lesion. Syphilis develops a typical painless lesion which does not suppurate. Tuberculous adenitis is usually a matted type and may or may not suppurate. If these patients come in before suppuration takes place they are usually treated conservatively, by hot applications, general hygienic measures; but in spite of this, most of them progress to suppuration. If the patient comes in with a suppurating bubo it is usually incised and treated for a period of two to three weeks, touching the wound with silver nitrate ten to twenty per cent. After they are opened, a few will heal, but the majority of these become chronic and require adenectomy. If it appears that they are not going to heal after proper conservative treatment, they are usually admitted and the gland removed. When these patients return to the clinic, we still have an open infected wound and it often takes some little while for these to heal with the usual clinic treatment.

There are other methods for treating lymphogranuloma inguinale. Ravaut was the first to use antimony preparations and thought he got some good results. Frei and Hoffman found tartar emetic of little value. Lehman and Pipkin use the simple aspiration method followed by injections of glycerin into the gland daily. They felt that they cured four cases by this procedure. Gay-Prieto claim good results from the intravenous use of prepared vaccines, made from the aspirations of suppurated glands. We have tried none of these procedures thus far.

This is a very open field as far as we are concerned and I do not think anybody in this particular section has done any important work on it other than Dr. von Haam and Dr. Lichtenstein. We plan to use some of these methods later on. At present we have only used incision and drainage and later excision of the gland if necessary.

This procedure has worked out fairly well in our hands and literature seems to indicate that it is about as good as any other method.

Dr. C. L. Chassaingnac: I have no new light to throw on the subject whatever; on the contrary, the little I know of it is something quite in the past. I would like to call attention to the fact that we have had this disease in New Orleans for a much longer period than that mentioned by the essayist. The cases that I first saw go back to over fifty years ago, though not then called by that name. I don't think it had been identified at all; a few were called serpigenous chancre. We had it in both the colored and white male wards. The cases were inherited from one generation to another of visiting men and internes, and various methods were tried. Some cases were treated very heroically. A general anesthetic was given. The lesions which extended from the groin up on the abdomen and downwards to the perineum were curetted with a sharp curet. Every bit of tissue that would yield and come with the curet was removed, of course causing a good bit of bleeding which was stopped as we went on with the thermo-cautery. After the tissue had been thoroughly removed and the surface cleansed and dried, the entire surface was touched up by means of a swab dipped in pure carbolic acid, left for a little while and then cleaned off with alcohol. I do not remember all the instances, but only one patient got well. The others were still there when I left.

So the condition is far from being new here. This places little light on the history of the disease but may be interesting along with what we heard to-night.

Dr. Rudolph Matas: It is a very interesting subject that Dr. Von Haam has brought before us, especially to those who like myself and my friend Chassaingnac can go back to the late seventies and early eighties, when we were residents at the Charity Hospital. I am quite sure that if we could only review the records of the cases treated in the venereal wards in the light of present knowledge and of the Frei test, that the list of cases of granuloma inguinale that Drs. von Haam and Lichtenstein have collected in the last few years would be very considerably increased.

At that time, that is, over half a century ago, the wards always housed a number of patients, both male and female, black and white, who remained for months and years in the services, to be transferred from one generation of residents to another, as chronic and virtually incurable venereal cases.

The clinical problem presented by these patients was not easily forgotten. There were deep indolent but progressive granular ulcers which attacked the genitals, eroding the penis and scrotum,

and spreading to the glands of the groin, thence to the perineum and perianal regions. In the women they appeared in the vulva, deeply infiltrating the labia and vagina, causing secondary indurated edemas which gave them an elephantiasic appearance, which was sometimes designated as vulvar lupus, or esthiomene. Sometimes they spread from the groin and pubes to the thigh, assuming a serpentine form, extending from the groin to the knee.

They fitted the diagnosis of phagedenic chancres and chancroids, but differed from these in their resistance to syphilitic treatment or to any of the usual methods of treating chancroids. Sometimes they seemed to yield to vigorous cauterization, but they almost invariably relapsed. In view of their intractable nature they were regarded as rodent ulcers (epitheliomas) which were treated by excision, the cautery, or caustic pastes.

We must remember that at that time there was no Wasserman test or its modifications, and that the pathologic laboratory was silent regarding the treponema or the Duerrey-Unna bacillus which, if available, would have helped in the etiologic diagnosis. In many of these, the ulcerations began as an indolent inguinal adenitis, without genital lesions. When these broke down, they would leave a granular bottom which slowly spread to the surroundings. These were regarded as "bubons d'embes," as Ricord had named them, and were ascribed to strumous or tubercular origin, but in this again there was no way of making a positive bacteriologic differentiation.

At that time the manifestations of syphilis were far more exteriorized than they are now, rupia and other deep pustular eruptions which were covered with conical crusts, were common, and so were all deeper ulcerative lesions of nose and nasopharynx, and of the osseous system; all these combined to give the syphilitic infection of the period a type that reminded one of the malignant pox of the middle ages. And now this hideous type has practically disappeared. In the course of the last half century it would seem that the treponema has retreated from the surface to find a refuge in the central nervous system, the aorta and the great arteries. We no longer deal with rupia and the fearful eruptions of former years, but with the far more intractable internal, hidden forms of neurosyphilis. What is interesting is that, while the gross, external manifestations of syphilis have disappeared, this type of ulcerative granulomatous disease, which undoubtedly existed in the past under different names, has remained and stands out in more isolated contrast since the old confusing phagedenic chancres and chancroids have largely abandoned the field. And this confusing experience appears to have been shared by almost every

country in which tropical and semi-tropical conditions appear to have favored the prevalence of this disease, and to have deserved for it the designation "Climatic Bubo" given to it by Cantlie in 1896.

It is only since Frei discovered his specific cutaneous reaction in 1926, and the more direct inoculation of the virus in guinea pigs and monkeys (De Bellard, 1926)<sup>1</sup> that it has been possible to identify the disease in its many forms. While the name of lymphogranuloma inguinale, given to it by Nicolas and Favre (1913) appears to be most popular at the present moment, Prof. Brumpt, in a learned review of the extremely varied nomenclature of this disease, read in the French Academy of Medicine last February, is inclined to discard all the new designations in favor of "Climatic Bubo" by which it is best known in tropical literature since Cantlie clinically identified it as a specific disease in 1896.

<sup>1</sup>Eugene Pignot de Bellard, graduate of Tulane University Medical School, 1907, a leading surgeon in Caracas, Venezuela.

Dr. E. Von Haam (in conclusion): I wish to thank Drs. Green, Matas and Chassaignac for their kind discussion.

The name "lymphogranuloma inguinale" mostly used in publications abroad is not well chosen to characterize the manifestations of this disease. For this reason Sulzberger has introduced the name "lymphopathia venereum" which is endorsed by an increasing number of authorities on skin diseases, such as Weidmann of Philadelphia.

## THE USE OF ARTIFICIAL PNEUMOTHORAX IN THE TREATMENT OF LOBAR PNEUMONIA\*

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The employment of a therapeutic agent that proves efficacious in the symptomatic treatment of lobar pneumonia deserves the earnest consideration of the physician. The use of a therapeutic procedure that offers the possibility of something akin to a specific in so serious a condition as lobar pneumonia merits the careful and critical attention of the doctor who is fully cognizant of the high mortality attendant upon this common infectious disease.

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The treatment of lobar pneumonia resolves itself into two important considerations. First, the amelioration of the symptoms that are a source of great trial and tribulation. Second, the effort to moderate the severity of the course of the disease and to hasten the onset of the crisis.

As in other acute infectious diseases, the primary and principal objective of the therapeutic attack is the achievement of rest, both physical and mental. The lancinating pain, the wracking cough, the exhausting restlessness, the agonizing dyspnea, are symptoms that conspire to defeat the successful issue of the bodily processes that are conducive to the recovery of the patient. The accomplishment of proper rest is dependent upon the relief of the great distress occasioned by the disease.

The use of artificial pneumothorax in lobar pneumonia affords an agent that appears to be a valuable aid in the relief of these severe and serious symptoms. The pain is rapidly and readily relieved, the cough is lessened in severity and frequency, the restlessness is replaced by repose and the breathing becomes deeper and freer. The pronounced improvement of the physical and mental condition of the patient is soon apparent. The introduction of air into the pleural cavity of the affected lung offers a symptomatic relief that is quicker, more lasting and without the disagreeable features of counterirritants and opiates.

In the total number of 63 cases reported in the available literature there is not one dissenting statement to the fact that in every patient the pleuritic pain was promptly relieved, the cough lessened and rest of body and mind secured. Such consistent comments of symptomatic relief from various sources bear witness to the efficacy of artificial pneumothorax.

In the consideration of artificial pneumothorax as a specific one meets with a difference of opinion. The number of cases reported is as yet too small to venture a final opinion concerning such an important matter. A cautious and critical clinical trial must be employed in a large group of cases over a long period of time before a final decision can be accepted. Nevertheless, a careful perusal of the literature im-



presses one with the fact that the course of the disease is rendered less severe and the crisis hastened in the majority of the cases. J. J. Coghlan<sup>7</sup> states that "the first and most obvious clinical result was that the induction of artificial pneumothorax initiated a series of events almost indistinguishable from the crisis which normally occurs in this disease." R. Viswanathan<sup>13</sup>, though disagreeing with Coghlan as to several of the results obtained writes that "there is no doubt that artificial pneumothorax does produce an artificial crisis, often temporary, sometimes pronounced; in our cases the crisis was more delayed and less dramatic than in the cases described by Dr. Coghlan."

Doctors L. M. Lieberman and Simon S. Leopold<sup>12</sup> were unable to find any experimental data in the literature on the use of therapeutic pneumothorax in lobar pneumonia. They induced experimental lobar pneumonia in 36 dogs. Eighteen of these dogs were treated by artificial pneumothorax the second day of the disease and 18 were untreated and used as controls. Of the 18 treated with artificial pneumothorax there were 15 recoveries and 3 deaths. Of the 18 untreated controls there were 5 recoveries and 13 deaths. The authors conclude by saying that "both the clinical reports in the literature and our experimental study indicate that the introduction of air in the pleural cavity in proper amount on the affected side produces, temporarily at least, a picture comparable to the crisis in lobar pneumonia, and achieves an artificial limitation of an otherwise self limited disease."

From 1921 to 1933 the combined total of white and negro patients admitted to Charity Hospital with lobar pneumonia was 2226 with a mortality of 30.45 per cent; that of the whites was 28.6 per cent and of the negroes 31.8 per cent. By the use of specific sera, as reported by various investigators from different hospitals the mortality has been reduced to 10 per cent. Several authors, Friedmann (1), David (2), Schottky (3), Duken (4), Ibrahim and Duken (5), Jahr and Neuman (6), Coghlan (7), Li (8), Anderson (9), Guadarrama (10), Perloth and Topercer (11), Lieberman and Leopold (12), Viswanathan (13), Taylor

(14), and Moorman (15), have reported a total of 63 cases treated with artificial pneumothorax with 6 deaths, giving a mortality of 9.5 per cent. An analysis of the deaths reveal that 4 could be attributed to delay in treatment and to serious complications. I fully appreciate the inability to draw any definite conclusion from so small a number of cases, but the results secured are nevertheless impressive and cannot be regarded lightly. Artificial pneumothorax when delayed beyond the third day loses in great measure its ability to influence the course of the disease. This is similar to what one notes in the use of specific sera. A successful reduction of the length of the disease is only obtained provided it is employed within the first three days.

I now wish to report a series of five cases of lobar pneumonia who received artificial pneumothorax. The treatments were administered by Dr. M. Campagna and myself in the medical service of Dr. S. C. Jamison at the Charity Hospital.

Case 1. Male Negro, aged 23 years, admitted to ward 250 on March 30, 1933, with left lobar pneumonia on the third day of the disease. He entered complaining of severe pain in the left side of the chest posteriorly and in axilla, exaggerated by coughing and rapid, shallow, jerky breathing and cough with blood-tinged expectoration, and fever. Physical signs of consolidation over left lower lobe posteriorly and in left axilla. Hyperaesthesia of skin overlying the chest pathology. Heart rate rapid but no cardiac displacement. Roentgenogram on March 31, 1933 revealed a thickened left pleura with signs of exudate. Sputa examinations negative for agglutination for pneumococci I, II and III. Blood on April 1, 1933 showed leukocytes 16,500 and neutrophils ninety per cent.

Upon admission he had temperature 104.4°, pulse 120, respiration 36. At 9 A. M. on the fourth day he had temperature 105°, pulse 128, respiration 42. Five hundred c.c. of air was now introduced into left pleural cavity. Treatment was begun the fourth day. At 6:30 P. M. of same day he had temperature 102.8°, pulse 128, respiration 42, and at 4 A. M. of the



following morning, the fifth day of the disease and the second day of treatment, he had temperature 99.4°, pulse 130, respiration 44 and at 8 A. M. temperature 99°, pulse 108, respiration 32. He was now given a second artificial pneumothorax of 600 c.c. of air and at 1 P. M. of same day had temperature 100.5°, pulse 100, respiration 34. On the following day, the third day of treatment at 2 P. M. he had temperature 102, pulse 124, respiration 38 and at 8 P. M. temperature 99, pulse 108, respiration 24. On the fourth day of treatment at 8 A. M. examination revealed temperature 104°, pulse 128, respiration 44 and consolidation of the lower lobe of the right lung. By 4 A. M. on April 6, 1933 he had temperature 98.6°, pulse 100, respiration 26 and remained normal until discharge. No further pneumothorax therapy was attempted upon the involvement of the opposite side.

Upon the completion of the first pneumothorax the pain was relieved and breathing was easier. Just before giving the second pneumothorax patient felt finely. During the administration of this treatment the patient perspired profusely and complained of a feeling of slight weakness. He was given stimulants and responded promptly. The next day he still had no pain but did have a feeling of some constriction in the chest. A roentgenogram taken on the following day revealed air in the left pleural cavity and a small amount of fluid in the axilla; also partial lung collapse with adhesions in apex and infraclavicular region. Heart and mediastinum displaced to the right. The right lung shows considerable increase in density apparently due to broncho-pneumonia.

On April 13, 1933, a roentgenogram showed a pneumo-pyothorax of left side with complete collapse of left lung and partial collapse or exudate process in right median lobe. The physical findings and the clinical course did not corroborate the findings of pyopneumothorax. On April 24, 1933, roentgenogram of chest revealed practically complete expansion of upper lobe of left lung with some fluid present. Right showed slightly less lung reaction than previous view.

On April 12, 1933, the patient was reported as having no fever for one week. The physical

evidence of left pneumothorax was still present and evidence of some consolidation of the lower right lobe. Respirations slightly increased. Feeling good. On April 30, 1933, patient was still symptomless and chest signs had cleared. He was in good condition, and so discharged.

Case 2. Colored male, aged 33 years, admitted to ward 250 on November 25, 1933, with right lobar pneumonia, fourth day of the disease. Type IV pneumococci present. Temperature 103.8°, pulse 120, respiration 2.

At 10:45 A. M. on the fourth day of disease, 500 c.c. of air was introduced into the right pleural cavity. Following pneumothorax there was prompt relief from pain. The breathing became deeper and more regular and the cough grew less in severity and frequency.

At 10:30 A. M. on the second day of treatment had temperature 103.4°, pulse 132, respiration 28. Patient rested well all night and felt well in the morning. A second pneumothorax was now given. The intrapleural pressure at the beginning of the treatment was  $-1\frac{1}{2}$  to  $-4\frac{1}{2}$ . After 500 c.c. of air had been given, the reading registered—3 to  $+1\frac{1}{2}$ . He felt more comfortable after refill. He had no pain and coughed only occasionally. No change noted in temperature, pulse, and respiration. At 11 P. M. he had temperature 101°, pulse 116, respiration 24.

On the eighth day of the disease, and fourth day of treatment at 8 P. M. had temperature 97°, pulse 88, respiration 24, and remained normal.

Case 3. Negress, aged 38 years, admitted to ward 341 on March 31, 1933 with left lobar pneumonia, on the fifth day of the disease with signs of consolidation over the left lower portion of the chest.

At 8 A. M. on the sixth day of the disease with symptoms still present she had temperature 104°, pulse 104, respiration 26. At 9:45 A. M. the patient was given 500 c.c. of air in the left pleural cavity.

At 8 A. M. on the second day of treatment she had temperature 104°, pulse 126, respiration 36. At 9:45 A. M. the second pneumothorax of 350 c.c. was given.

At 5 A. M. on the third day of treatment she had fever all day.

At 8 A. M. on the ninth day of the disease, the fourth day of treatment she had temperature 98°, pulse 104, respiration 30. Following the first pneumothorax the patient became delirious. She was decidedly better three days later. Following the first pneumothorax the patient was relieved of pain and the breathing became deeper and more regular.

Case 4. Negro male, aged 29 years, admitted to ward 250 on June 25, 1934 with right lobar pneumonia, the fourth day of the disease. Examination revealed a patient who appeared very ill and who showed signs of consolidation over the lower right chest.

On the fifth day of the disease 700 c.c. of air was administered. A roentgenogram showed air in the right pleural cavity with right lung only partially compressed. No agglutination for pneumococci of groups I, II, or III, could be obtained. Leukocytes, 20,500 and neutrophils ninety per cent.

Just prior to pneumothorax patient had temperature 100.4°, pulse 100, respiration 24. On the second day of treatment patient had, at 8 A. M., temperature 102°, pulse 110, respiration 30. At 9 A. M. the second pneumothorax of 800 c.c. of air was given. The intrapleural pressures were all negative. On the third day of treatment he had, at 8 P. M., temperature 102°, pulse 118, respiration 28. On the fourth day of treatment he had, by 8 P. M., temperature 99°, pulse 100, respiration 28. At 8 A. M. on the tenth day of the disease and the sixth day of treatment he had temperature 98.6°, pulse 80, respiration 26, and remained normal thereafter till discharged.

In this case as in the others the pain and the dyspnea were greatly relieved and the cough much lessened.

Case 5. Negro male, aged 21 years, admitted to ward 250 on April 3, 1934, with right lobar pneumonia on the eighth day of the disease with severe pain in the right chest. His condition was considered poor. Blood revealed leukocytes 20,000, and neutrophils 92 per cent.

At 10 A. M. on the ninth day of the disease he had temperature 103.2°, pulse 122, respira-

tion 62. At 11 A. M. a right artificial pneumothorax of 500 c.c. of air was given. Following the pneumothorax the expiratory grunt ceased and the pain was relieved promptly and the patient volunteered that he felt much better.

At 1 P. M. on the second day of treatment he had temperature 104°, pulse 120, respiration 70, and his condition was stationary. From then on the patient ran an undulating temperature curve of fever. The general condition was very good.

At 4 A. M. on the sixteenth day of the disease and the eighth day of treatment he had temperature 98.6°, pulse 100, respiration 36, and remained normal except for several brief rises to 99.3°.

#### COMMENT

In the 5 cases reported the symptomatic relief afforded was prompt and persistent. The alleviation of pain was striking. The respiration became more regular and the cough was greatly lessened in frequency and intensity. There was a definite feeling of euphoria as reflected in an improvement of appetite and ability to rest more comfortably and sleep more peacefully. It is to be noted that treatment was instituted rather late in all cases. In case 1 treatment was begun on the fourth day; in case 2 on the fourth day; in case 3 on the sixth day; in case 4 on the fifth day and in case 5 on the eighth day.

Resolution occurred in case 1 on the fifth day; in case 2 on the eighth day; in case 3 on the ninth day; in case 4 on the tenth day and in case 5 on the sixteenth day. With the exception of case 1 it is apparent that to evaluate properly the specific-like action of artificial pneumothorax in lobar pneumonia is impossible from this study. Treatment was started at a time when even specific sera are considered of very little or no value. Yet, in case 1 which was treated on the fourth day, the temperature dropped from 105°F. at 10 A. M., just prior to the introduction of air to 99°F. at 8 A. M. the following morning. It is interesting to recall the fact that during and immediately following second artificial pneumothorax the "patient per-

spired profusely and complained of a feeling of slight weakness". This appears to be unquestionably a crisis artificially induced and the disease in that lung cut short. I feel that the events observed in this case bespeak the specific action of this procedure. It corroborates the findings reported in the literature. One, therefore, cannot infer from this report that the procedure has no curative value.

No complications and no deaths occurred following the use of artificial pneumothorax in this group of cases. It was gratifying to note the ease with which the pneumonic lung could be compressed. Following the pneumothorax there was no sudden drop of temperature in any of the cases. The respiration and pulse rates directly followed the fortunes of the fever curve. Although the rate of respiration was not decreased the respiratory distress was strikingly and rapidly relieved. Two inductions of air with an average of 540 c.c. was given to each patient. A distinct advantage of this treatment is that it may be employed in any type of pneumonia (lobar) and at any time during the course of the disease.

#### SUMMARY

Artificial pneumothorax is a therapeutic agent of great value in the symptomatic treatment of lobar pneumonia as revealed by the results obtained in the group of five cases reported. This is corroborated by a brief review of the literature. The amelioration and the alleviation of symptoms was prompt and permanent. In one of the cases reported the specific action of the procedure was evidenced by the induction of an artificial crisis. The small number of cases treated and the admission of the patients to the hospital rather late in the disease prevented the possibility of more proof concerning this feature of the treatment. It cannot be gainsaid that in artificial pneumothorax we have a therapeutic agent that appears to be a great boon to the physician in the treatment of lobar pneumonia. Many details of treatment remain, of course, to be elucidated. At the present writing artificial pneumothorax must be considered as one, though a most important one, of the several agents employed to combat this dread in-

fectious disease. The use of this treatment in pneumonia necessitates the warning that unless one is experienced in the use of artificial pneumothorax it is better to refrain from its employment because of the dangers attendant in its use plus the added dangers of damage to the pneumonic lung.

#### REFERENCES

1. Friedmann, U.: *Deutsche med. Wchnschr.*, 47:433, 1921.
2. David, O.: *Deutsche med. Wchnschr.*, 47:802, 1921.
3. Schotky, P.: *Med. Klin.*, 19:1928, 1923.
4. Duken, J.: *Klin. Wchnschr.*, 9:2195, 1930.
5. Ibrahim, J. and Duken, J.: *Arch. f. Kinderh.*, 84:241, 1928.
6. Jahr, J. and Neumann, R.: *Klin. Wchnschr.*, 9:2200, 1930.
7. Coghlan, J. J.: *Lancet*, 1:13, 1932.
8. Li, K. H.: *Chinese Med. Jour.*, 46:886, 1932.
9. Anderson, H. G.: *Chinese Med. Jour.*, 46:769, 1932.
10. Guadarrama, L.: *Medicina, Mexico*, 12:141, 1932.
11. Perloth, S. and Topercer, M.: *Wien klin. Wchnschr.*, 45:1508, 1932.
12. Lieberman, L. and Leopold, S. S.: *Amer. J. Med. Sci.*, 187:315, 1934.
13. Viswanathan, R.: *Lancet*, (Letter), 1932.
14. Taylor, A. B.: *The Practitioner*, 127:759, 1931.
15. Moorman, L. J.: *South. Med. Jour.*, 27:233, 1934.

#### DISCUSSION

Dr. S. Chaille Jamison: The first thing I would like to say is that anyone who is doubtful of the severity of lobar pneumonia, or who knows when he sees it that he is dealing with a serious disease must be impressed by the fact that it is a disease accompanied by high mortality. Our figures for this section and this part of the world for true lobar pneumonia run from 15 per cent to 25 per cent. In most places they run as high as 30 per cent, even 40 per cent mortality by the ordinary old conservative treatment. Now, when we face any such disease as that, we must grasp every method of reasonable safety that is going to bring about cure, that is going to give us any help.

We see a fair degree of lobar pneumonia, of course. I would like to say here that there are about fourteen or fifteen different types. We have several great therapeutic weapons provided we make a diagnosis early enough. A point startling and harrowing to see, is how late in the disease the diagnosis of lobar pneumonia is usually made and the patient then rushed to the hospital for oxygen or some therapy. In the treatment of pneumonia, as in the treatment of diphtheria, we must make the diagnosis as promptly as possible and before the fourth day. We have several methods more or less specific: First, we have serum. We have Type No. 1 and Type No. 2 serum to combat the poison of the disease.

Now, from what I have seen of lobar pneumonia, and it has not been a small experience, I would



advocate first of all pneumothorax, but I would not advocate pneumothorax unless the physician had some experience and the patient was not a bad risk. You can take the pneumothorax machine to the patient's bedside and do it in the home with the greatest simplicity. I have no hesitation doing it in the home. It so happens in lobar pneumonia that the induction is extremely simple. You use the procedure far more easily than in cases of tuberculosis because you don't have the question of adhesions to deal with. Now with the experience that we have had and from what I have read of the experience of others, the immediate relief of the symptoms is quite startling. Your patient from having been a man in great pain, with a very hacking cough and rapid respiration, is turned into an individual breathing easily, getting plenty of oxygen. There is quite a startling relief of symptoms.

Now, our own experience in a very small number of cases has been that the crisis is not induced as promptly as many observers allowed us to believe. We have seen a few cases where the reaction simulated a crisis but that has not been a constant picture. Up to very recently we have not lost a single case and we have taken them as they came to the hospital, regardless of length of time, regardless of the type of organism. These cases went along and got well. We had a case recently who died of empyema, so far as I know he was a good risk and the pneumothorax did not cause his empyema.

I would like to attract your attention to the fact that the greater the number of cases of lobar pneumonia you have who get well, of course, the greater percentage of empyema. Therefore in Type I pneumonia we see a great number of cases of empyema.

In giving artificial pneumothorax remember that First, a small amount of air for the first injection, 400 or 500 c.c., and repeat with a smaller in 6-8 hours. Now, the next step with Type No. 1 or Type No. 2 pneumonia is to give serum. Next the second procedure is oxygen. I have talked enough before this Society on subcutaneous injections of oxygen. In my service, we inject 1000 c.c. oxygen under the skin and the results have been splendid. There is no pain to the patient—the pain is negligible.

In the treatment of lobar pneumonia, therefore, we have three methods: Use of pneumothorax, which should not be any more serious than taking blood out of a man's veins; Serum: if the patient is Type No. 1 or No. 2, give 10,000 anti-pneumococcus serum and repeat often enough to care for the needs of the patient. Give in addition to this method oxygen subcutaneously.

We felt sure you would be interested in the presentation of this very small group of cases.

Before I sit down I would like to remind you that this method is old. I saw it first in the British Medical Journal some five or six years ago. In our Journal we have reported 6 cases. There were reports made this year before the Association of American physicians and I am sure Dr. Musser will tell us something.

I have to say the advantage of pneumothorax seems to be immediate relief to the patient and in a certain number of cases appears to bring on the crisis, and regardless of type.

Dr. Lemann: I am impressed by the apparent harmlessness of the procedure, and from that very fact I think we should be encouraged to try it further. As Dr. Robbins has insisted in his paper, the collection of patients is entirely too small upon which to form a judgment. I think we must reserve judgment for a larger series.

Dr. Sydney Jacobs: I think that the use of artificial pneumothorax in lobar pneumonia offers something of definite value. I do not believe that we hear of lobar pneumonia in its typical form so frequently in the South as in the North or elsewhere and consequently the application of specific serum therapy has been limited. There is another reason for the relatively infrequent use of specific serum therapy and that is the expense entailed. For both these reasons, artificial pneumothorax should become an exceedingly valuable addition to our methods of combatting pneumonia and deserves a much wider trial.

Dr. J. A. Danna: I have been very much interested in the recent reports of the treatment of lobar pneumonia by artificial pneumothorax. Morelli, an Italian army surgeon and pupil of Forlanini, used pneumothorax in the treatment of chest wounds during the World War for the purpose of preventing and, where it had already taken place, for the purpose of stopping pulmonary hemorrhage. He carried the pneumothorax to the point of actual positive pressure where active bleeding was going on until the bleeding had been arrested. He also made the point that where the lung had been contused and there was a possibility of abscess developing the compression of the lung by pneumothorax minimized the tendency to abscess formation and often prevented it. He believed that it had a decidedly beneficial effect on any existing broncho-pneumonia and that it had a tendency to prevent the development of broncho-pneumonia. The recent successes in the treatment of lobar pneumonia with artificial pneumothorax I think bears out Morelli's opinion and show that the same principles may be applied in the treatment of lobar pneumonia. We were taught at medical school, especially by Dr. Chaille, that the



lung in lobar pneumonia becomes perfectly solid. This probably is not exactly the truth. The artificial pneumothorax produces a compression or shrinkage of the lung resulting in an improvement in the factors that bring about the arrest of the infection. It is interesting to note the remarkable relief of pain. The pain is probably due to the rubbing together of the inflamed serous surfaces. The pneumothorax separates the surfaces and probably thus relieves the pain. It is a well known fact that permanent adhesions follow after an attack of lobar pneumonia. I should think that if the artificial pneumothorax were maintained and the pleural surfaces kept separated until all inflammation had completely subsided adhesions would probably not form. This would be a very interesting point, I believe, for some future investigation.

Dr. Frank L. Loria: Ever since the introduction of artificial pneumothorax by Forlanini, the procedure has been used for almost every possible type of chest disease. The report given us by Dr. Robbins to-night is quite interesting. However, from the surgical standpoint I wonder if we are not doing these patients some harm. The number of cases on which it has been tried is very small and I think with Dr. Lemann we should for that reason reserve final opinion. I believe, too, that in placing air into the chest cavity, we not only perhaps collapse the diseased lung which is of supposed liver hardness—and which I doubt—but we likewise take from that individual an area of pulmonary tissue which is necessary to his fighting off the disease. I feel he should not be deprived of this perfectly normal lung tissue, and consequently I wonder if this phase of the subject has been given enough thought. I wonder likewise if the lung is actually collapsed. Most of us have seen lung tissue from lobar pneumonia cases on the autopsy table and we have observed the firmness it has. I wonder if the introduction of air in the chest cavity would collapse such areas. I doubt it.

I believe we are justified in awaiting further reports before undertaking the procedure routinely.

Dr. Musser: Dr. Jamison has spoken so well and so forcibly I hardly think it is necessary to add anything more to the discussion. I would like to say, however, that this particular method has not achieved any popularity up to the last year.

As Dr. Jamison points out an article appeared in the *British Medical Journal* in 1926, and about the same time abstracted in one of the *American Journals*. Then, a few years later, simultaneously throughout the United States everybody started to use pneumothorax, to induce pneumothorax in patients who had lobar pneumonia.

I have talked to many men who have used this

procedure and all are enthusiastic. They felt that there had been something new added to the treatment of pneumonia. The method is more than a passing phase of enthusiasm about a new procedure; it is something very definite, very positive and it is undoubtedly of a great deal of value.

Dr. I. L. Robbins (In conclusion): I wish to thank all the members who took part in this discussion. I hardly thought it would prove to be of such popular interest. Of course, I realize it is impossible in the time allotted to discuss all the aspects of the subject. I said in my paper that a great many details of the treatment remained to be worked out to the satisfaction of all physicians.

I agree with Dr. Lemann that one should not permit a final opinion as to the curative value of the treatment. I indicated this in my paper. I stated that the symptomatic result is so marvelous that one certainly should attempt to use it wherever possible.

Dr. Jacobs stressed the point that we should try to use it on a larger scale because of the practically low cost or added cost to the patient and because of the alleviation of symptoms noted in all types. With this I am in wholehearted accord.

Dr. Loria gave us his opinion about the rationale of the treatment and the difficulties inherent in the treatment. Of course, in science, we have largely gotten away from the "I believe this and I believe that" point of view. We have worked it out another way; we no longer indulge in scientific organizations in speculative thought concerning the possibility of doing something. We actually attempt to do it and from the endeavor we learn whether it is possible or not to accomplish a particular undertaking. Belief has yielded to fact.

It is not impossible to compress the lung. I want to emphasize the difference between the use of compression and collapse, the latter was the older treatment. We do not attempt to so collapse the lung that all the air is squeezed out and it remains a solid mass of tissue. Compression, that means bringing about a certain amount of pressure which will satisfactorily fulfill the requirements of the treatment. We rarely give a positive pressure. We introduce the air slowly; we don't attempt collapse. There is no doubt in my mind that a patient markedly dyspneic is getting the minimum amount of oxygen into his lungs and if you can inject into the pleural cavity something that makes breathing freer, brings about cessation of pain, certainly by all reasonable standards you make it possible for that patient to get air into his lungs. Don't collapse, compress, and the air will be able to partially compress lung and do the patient good.

I don't believe the validity of that argument about the amount of solid lung making the pneumothorax very difficult because practical experience has taught me that it is easy to compress the solid lung. Also when air is put into the pleural

cavity and the lung partially compressed, less amount of toxic material gets out into circulation; that certainly happens in pulmonary tuberculosis and it works the same way in lobar pneumonia.

We have felt that it is not alone the amount of lung out of condition that causes dyspnea. We believe it is the toxemia that is principally responsible.

One other fact I wish to reiterate, and that is that in many of these cases there seems to be a temporary crisis induced. This crisis is short lived and unless pneumothorax is repeated, the patient's temperature goes up again.

The question of how much air to put into the lung requires a great deal of study and observation. So far as the question of relief is concerned, there is no argument whatever. The patient is greatly relieved. Second, it may have some curative value and until we have seen it disproved successfully, we will continue to use it. It may prove to be one of the important procedures to use in the disease.

#### A MODIFIED MURPHY TUBE FOR CONSTANT SUCTION DRAINAGE OF THE GASTRO-INTESTINAL TRACT

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and  
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SHREVEPORT, LA.

The indications and value of suction drainage of the gastro-intestinal tract have been well established. Robertson Ward<sup>1</sup> was possibly the first to utilize continuous suction to an indwelling duodenal tube. He employed a Connell suction apparatus. This consists of a triumph syringe into which a stopper containing two pieces of glass tubing is attached. One of these glass tubes is connected to a suspended enema can, the other, either directly or through a Y-tube, to a duodenal tube; to the tip of the syringe is attached a rubber tube which empties into a basin on the floor. By allowing the water from the enema can to drop into the syringe at a rate of 100 drops per minute, sufficient suction is created in the barrel that continuous drainage through the second glass tube connected to the duodenal tube is afforded.

Wangensteen and Paine<sup>2, 3, 4</sup> have been largely responsible for popularizing the principle of suction decompression. They, however, devised an apparatus using water bottles for the creation of suction. While quite efficient, the

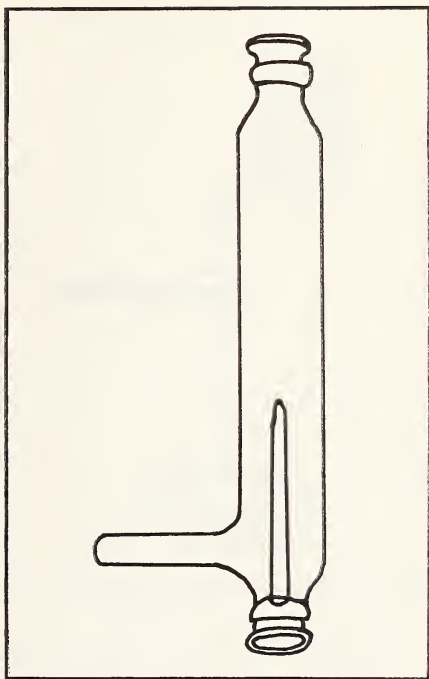


Fig. 1

apparatus is slightly complicated to assemble and furthermore has to frequently be disassembled for the purpose of cleaning or filling the upper bottle.

Willard Bartlett, Jr.<sup>5</sup> more recently has recommended an apparatus very similar to that originally devised by Ward. Instead of a triumph syringe Bartlett uses a 20 c.c. syringe. The smaller barrel permits the maintenance of suction with water dropping at the rate of 40 to 50 drops per minute. Since this is about one half the rate which is required with the triumph syringe, this apparatus has the advantage that water in the enema can will last twice as long.

The disadvantage of the Bartlett apparatus, however, is that most 20 c.c. syringes have a tip that is so small that mucus or inspissated bile from the upper gastro-intestinal tract frequently clog it so that not only is the suction broken but there may be regurgitation back into the patient's stomach. Again, a syringe is a fairly

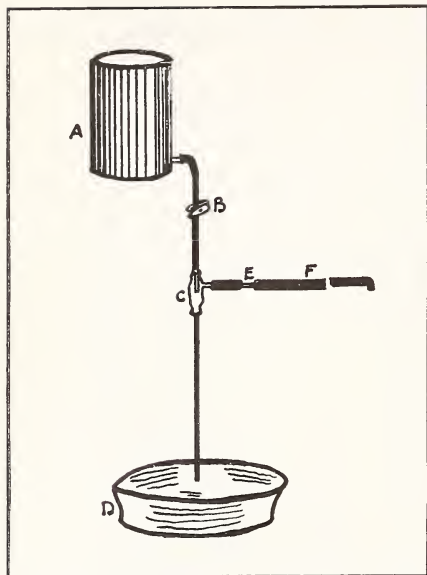


Fig. 2

- (a) Euema can.
- (b) Screw clamp for regulating flow of water from euema can.
- (c) Murphy tube with side arm.
- (d) Pan to catch water from euema can and fluid aspirated from gastro-intestinal tract.
- (e) Glass tubing (window).
- (f) Duodenal tube.

expensive apparatus and, as it is the barrel that is usually broken, to assemble this apparatus usually means sacrifice (at least temporarily) of a good syringe.

Using the principle of the Connell suction apparatus, we have had made an inexpensive and simple modification of the Murphy drip tube which we have found very effective. Instead of the small vent on the side of the tube, it has been enlarged to a diameter of 5 mm. and a side arm attached (Fig. 1). The arrangement

of the apparatus is otherwise essentially like that of Bartlett and of Ward (Fig. 2). The inlet of the tube is attached to a suspended enema can; a piece of small bore rubber tubing is attached to the outlet and empties into a basin on the floor. It is important that this outlet tubing not be too large, otherwise air will travel up it and break the suction. The indwelling duodenal tube is attached to the side arm. By means of a screw clamp, water is allowed to drop through at about 60-80 drops per minute. This establishes and maintains a degree of suction sufficient to keep air and liquid flowing through the duodenal tube.

This modified Murphy tube has several advantages: (1) it consists of a single piece requiring no assembling and is air tight; (2) it is efficient; (3) it is inexpensive; (4) it requires only about 60-80 drops per minute to maintain suction so that the enema can need not be replenished so often; (5) the openings are sufficiently large that mucus, etc., will not readily clog them.

#### SUMMARY

An efficient, inexpensive modified Murphy tube which utilizes the Connell suction principle is described for use in maintaining constant suction drainage of the gastro-intestinal tract.

#### REFERENCES

1. Ward, Robertson: Acute dilatation of the stomach. *Am. J. Surg.*, 8:1194, 1930.
2. Wangenstein, O. H., and Paine, J. R.: The necessity for constant suction to indwelling nasal tubes for effectual decompression or drainage of upper gastro-intestinal tract. *Surg. Gyn. & Obs.*, 57:601, 1933.
3. Idem. Treatment of acute intestinal obstruction by suction with the duodenal tube. *J. A. M. A.*, 101:1532, 1933.
4. Idem. Nasal catheter suction siphonage: its uses and technique of its employment. *Minn. Med.*, 16:96, 1933.
5. W. Bartlett, Jr.: The concept of pyloric balance in ileus treated by continuous suction from the stomach. *Am. J. Surg.*, 23:484, 1934.

# NEW ORLEANS Medical and Surgical Journal

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## MALPRACTICE SUITS

The Journal has commented editorially previously upon the fact that malpractice suits very commonly depend upon some other physician. The offending doctor may have carelessly allowed slip words of criticism concerning the conduct of a case by a fellow practitioner to the patient or patient's family. If

such statements are unfavorable often the individual seizes upon them to attempt to secure judgment against a physician, sometimes not so much with the hope of winning a malpractice suit as of developing an obnoxious way of slipping out of payment of his bill.

A series of resolutions in the last month's Journal were published in the Mississippi section under the heading of the Central Medical Society. These resolutions in general stated that unjustified personal damage suits are increasing; unjustified malpractice suits are becoming more prevalent; to carry these through the courts often requires the collusion of members of the legal and medical profession; and speaks of them as legalized blackmail. In order to combat this increasing tendency the organization has forbidden every member of the Society to give evidence in malpractice action unless the testimony has been examined and proved by those designated in the Society for the purpose. Through various steps all the evidence is investigated and then put up to impartial medical "consultants" who then will express in writing their individual opinion as to the validity of the suit. The physician will then be encouraged, or forbidden, to testify according to the opinion of these who are considered to be absolutely fair and impartial experts. If, after the decision has been arrived at, the physician goes ahead and testifies without paying proper attention to this decision he will be expelled from the Society for unprofessional conduct.

This plan of the Central Medical Society seems like an excellent step to prevent the unscrupulous use of the courts to detract from the ability of a physician. Even if the suit is lost, or dismissed by the court, it does react deleteriously upon the defendant. However, we again repeat that such drastic steps would probably be unnecessary if the average doctor refrains from comment, critical or otherwise, upon the treatment of his associates' patients. This simple little step will obviate more demanding exactations that the Central Medical Society suggests as the measure to prevent such suits.



## PRESSE MEDICALE

It is with special pleasure that we acknowledge the compliment extended to "The Journal" by its distinguished contemporary, the "PRESSE MEDICALE" of Paris, by devoting a leading editorial article of over six columns, of its issue for April 27, to our February number which was especially dedicated to the celebration of the Centennial of Medical Education in New Orleans, held on January 7, 1935, under the auspices of the Orleans Medical Society. The article quotes liberally from the

addresses delivered by Drs. Fossier, Bass and Matas on that occasion and reproduces views of the Charity Hospital as it appeared in 1832, and of the Josephine Hutchinson Memorial of Tulane University when inaugurated in 1930.

The achievements and contributions of the French speaking physicians of Louisiana to the progress and culture of medicine in Louisiana, which Dr. Matas particularly stressed in his address, are made the special object of commentary and praise by the editors of the PRESSE in their gratifying appreciation of our Centennial Celebration.

## HOSPITAL STAFF TRANSACTIONS

## TOURO INFIRMARY

The regular meeting of the Medical Staff of Touro Infirmary was held Wednesday, June 19, 1935, Dr. Henry Blum, Chairman, presiding.

Dr. B. R. Heninger and Dr. Karl la von Dickens presented a case report of complete heart block due to calcareous disease of the bundle of His. Dr. Dickens presented illustrations of the gross appearance of the heart and photomicrographs of the microscopic pathology. This was discussed by Drs. Lemann and Lanford.

Dr. I. W. Kaplan reported a case of duodenal fistula closed by Wagenstein suction. Drs. Maes and Ochsner added to the discussion of this report.

A case of anterior poliomyelitis with autopsy findings was presented by the Program Committee. The spinal cord of the case was displayed.

Dr. Blum and Dr. Lemann, as Chairman of Committee, spoke briefly upon Dr. MacLean's leaving Touro to assume new duties in Rochester. On behalf of the Staff, Dr. Lemann presented Dr. and Mrs. MacLean with a gift, to which presentation both Mrs. and Dr. MacLean responded.

Willard R. Wirth, M. D.

## FRENCH HOSPITAL

A regular staff meeting of the French Hospital Staff was called to order Friday, June 14, 1935 at 8:00 P. M. The minutes of the last meeting and an analysis of the hospital records for the month, were read by Dr. Ane, in the absence of Dr. Tessitore.

Dr. Geraci discussed the death of Mr. S. T., Dr. Baron's patient.

Dr. Ogden discussed the death of his patient Mrs. T., who had carcinoma of the kidney. The kidney was the size of the human head. After a cystoscopic examination was done, carcinoma of the kidney was found. Her blood pressure was as low as 40 mm, remaining that for 3 days. She did

not respond to methods to elevate the blood pressure.

Dr. Geraci also discussed the death of Dr. Jung's patient.

Dr. Graffagnino then discussed a case of seven months twin pregnancy, which he thought to be of much interest. The mother, although seven months pregnant, was 8 or 9 months in size. She suffered no ruptured membranes. A small fetus, weighing about 3 or 4 pounds, died one hour after birth. There was no evidence of the dead child, which was believed to have been dead about a month before birth.

Dr. Socola discussed a case of infantile paralysis in a small child. The blood of a relative, who had previously had infantile paralysis, was injected into the patient. The child now walks perfectly. Dr. Socola finds the best treatment for poliomyelitis is human adult blood. The most suited person is an adult living in a large city the greater part of his life. The blood should be given intramuscularly, 45 to 60 c.c. A newborn child should be given 50 c.c. for the first injection and 50 c.c. in the next five days.

Dr. Graffagnino then presented a very interesting paper on "Uterine Bleeding." He discussed the 1935 status of endocrine research, which included the interrelationship between the anterior pituitary and ovarian hormones and thyroid. He showed the part played by these hormones and the menstrual cycle. Throughout the discussion he demonstrated how the imbalance of hormones caused certain types of uterine bleeding. He also discussed therapy briefly.

Dr. Alsobrook discussed the paper.

Dr. Zander stated that if the subject of uterine bleeding was gone into more thoroughly there would be less complications.

Dr. Graffagnino stated that there is no standardized dose for the various drugs prescribed for

this condition, but everyone should be very cautious with the use of them.

Dr. Ader then thanked Dr. Graffagnino, in behalf of the staff, for a very interesting paper.

N. J. Tessitore, M. D.

#### CLARKSDALE HOSPITAL STAFF MEETING

The staff of the Clarksdale Hospital and the Coahoma County Medical Society met in regular monthly meeting at the Clarksdale Hospital, July 10 at 1:30 P. M. Dr. W. S. Slaughter, president, presided. Dr. Lipsey of Memphis was a visitor. The roll was called and the minutes of the previous meeting were read and adopted.

The secretary reported that Dr. T. G. Hughes wished to express his sincere appreciation for resolutions sent to him since the last meeting.

The secretary, acting for the superintendent of the Clarksdale Hospital, asked for a written ruling as to whether or not it is to be permissible for physicians on the staff of the Clarksdale Hospital to collect fees from the E.R.A. for medical or surgical services rendered to patients on the E.R.A. relief rolls and using beds in the Clarksdale Hospital which are maintained and paid for by Coahoma County and the City of Clarksdale, patients occupying said beds necessarily being charity patients. This was discussed fully by Drs. Wilkins, Slaughter, Levy, Brandon and Griffin, and Dr. Wilkins made a motion that the chair appoint a committee of three to work out rules and regulations relative to this matter and present it to the Board of Directors of the Clarksdale Hospital at the next regular meeting. Motion was seconded by Dr. W. S. Slaughter and passed unanimously. The chair then appointed, Drs. LeRoy Wilkins, chairman, W. H. Brandon, and J. L. Levy as members of the committee.

The following program was presented:

Optic Neuritis.—Dr. D. H. Griffin, Clarksdale.

Discussed by Dr. E. LeRoy Wilkins and Dr. Lipsey. Dr. Griffin closed.

Congenital Absence of Uterus (Case Report).—Dr. J. L. Levy, Clarksdale.

Discussed by Drs. W. H. Brandon, E. LeRoy Wilkins, Lipsey, W. S. Slaughter and N. C. Knight. Dr. J. L. Levy closed.

The staff and society then adjourned until the next regular meeting on the second Wednesday of August.

N. C. Knight,  
Secretary.

Abstract: Congenital Absence of Uterus.—Dr. Julius L. Levy.

The following case is of interest on account of its comparative rareness and as showing the necessity of making a most careful examination in every case of amenorrhea lasting for any considerable time.

The patient was a young white woman, single, aged eighteen years. She consulted me in March, 1935, about the absence of menstruation. She was of fair complexion, height 60 3/4 inches; weight 125 pounds, and of stocky build; she was one of nine survivors of a family of fifteen. She had never menstruated, but when fifteen years of age she began having pains in both sides and in epigastric region and had to stay in bed for two weeks. Since then she had never had any of the symptoms usually present at or about the menstrual period, although she had been extremely nervous since that time and she had a terrible temper, and was disagreeable with the remainder of the family. The breasts were moderately well developed and her figure was fairly well proportioned. Her general health was good. She had never suffered from typhoid or other fever or from any acute disease with the exception of mumps when she was eight years of age and influenza when she was seventeen years of age and she had never had an accident of any kind. Her mother and father are 57 and 62 years of age respectively and are in good health.

*Examinations*.—I found the external genitals quite normal in appearance and there was the usual growth of hair on the mons veneris; the labia majora and minora, the clitoris, and the meatus urinarius were all well developed; the hymen readily admitted the finger to pass into the small vagina which was about two inches long and of a fair calibre. It was smooth throughout its mucous surface, and nothing could be felt above it but intestines; not even a thickening of the upper wall, the roof, of the vagina could be discovered, but on the contrary, the upper portion of this cul-de-sac was thinner than the other portion of it and was movable in every direction. On bimanual palpation and by recto-abdominal examinations no uterus could be mapped out. After having completed my examination I expressed the opinion to my patient that she had no uterus and only rudimentary ovaries and tubes that she would never menstruate and that she could not possibly conceive, and I proposed that with her permission I call a consultant to my office to get a corroborative or other opinion. She readily agreed to this suggestion. The consultant arrived at the same opinion as expressed by me, the only point of difference being that he thought the ovaries might be present but in an arrested development.

In connection with this case I would, as before remarked, strongly advise that in all cases of continued amenorrhea a most careful examination should be made and more especially in those cases in which the menstrual function has been unduly delayed or never occurred, and would strongly deprecate a routine practice of prescribing medicines prior to examination in the hope that good will result.

# NATCHEZ SANATORIUM STAFF MEETING

## JUNE 9, 1935

1. Call to order by chairman.
2. Reading of minutes, previous meeting.
3. Bids of Mississippi River Commission discussed.
4. Analysis of hospital service.
5. Analysis of clinical cases.
6. Discussion community and charity hospital.
7. Report of rare case of teratoma of brain, in newborn by Dr. E. E. Benoist.

W. K. Stowers.  
Secretary.

# VICKSBURG SANITARIUM STAFF MEETING

A regular monthly meeting of the staff of the Vicksburg Sanitarium was held Wednesday, July 10, Dr. R. A. Street, Jr., president, presiding. The program included the following:

1. Supper.
2. Reading of the minutes of the last meeting.
3. Business of the staff.
4. Reports from the Records Department and Analysis of the Work of the Hospital.
5. Report of Vital Statistics from the Warren County Health Department.—Dr. F. Michael Smith, Director.
6. Special Case Reports:
  - (1) Carcinoma of the Ovary.—Dr. G. M. Street.
  - (2) Advanced Carcinoma of the Cervix Uteri.—Dr. A. Street.
  - (3) Hyperthyroidism—Thyroidectomy (Motion Picture).—Dr. J. A. K. Birchett, Jr.
  - (4) Fever Therapy.—Dr. Walter E. Johnston.
7. Special Reports:
 

The Recent Meeting of the American Medical Association at Atlantic City.—Dr. G. M. Street.

Follow-up Records—Carcinoma of Cervix Uteri.—Dr. Leon S. Lippincott.
8. Demonstration of Selected Radiographic Studies: (1) Joint Mouse; (2) Duodenal Ulcer (Two Cases); (3); Cholelithiasis (Two cases); (4) Foreign Body in Esophagus.
9. Three Minute Reports of the Literature of the Month:
  - (1) Strongyloides Stercoralis Infestation.—Dr. Leon S. Lippincott.
  - (2) Meningococcic Antitoxin.—Dr. G. C. Jarratt.
  - (3) The Use of Folliculin in Vulvo-Vaginitis of Children.—Dr. R. A. Street, Jr.
  - (4) Orthoptic Treatment of Concomitant Squint.—Dr. H. H. Johnston.

Thirteen members of the staff and three guests were present.

The next meeting of the staff will be held Monday, August 12, 1935.

Leon S. Lippincott,  
Secretary.

# Abstract: Follow-Up Records—Carcinoma Of Cervix Uteri.—Dr. Leon S. Lippincott.

Forty-six cases of squamous cell carcinoma of the cervix uteri were considered. All were first seen five or more years ago as follows: 1923 one; 1924 nine; 1925 two; 1926 seven; 1927 seven; 1928 three; 1929 ten; 1930 seven. Twenty-five patients were white and twenty-one colored.

Twelve patients or 26 per cent are known to be living. Of these ten are white and two colored. Fifteen patients are known to be dead or 32 per cent. Of these eight are white and seven are colored. No follow up record is available for nineteen patients or 41 per cent. Of these seven are white and twelve colored.

Of the twelve living patients, nine were treated by radium alone; one by radium and deep roentgen ray therapy; one by surgery alone; and one by radium and surgery.

Of the fifteen known dead, eleven were treated by radium alone; one by radium and surgery; and three received no treatment.

The grade of malignancy is known in thirty-three cases with results as follows:

	Living	
Grade I.....	4—50 per cent	
Grade II.....	4—80 per cent	
Grade III.....	1—14 per cent	
Grade IV.....	3—23 per cent	
TOTALS .....	12—37 per cent	
Dead	Not Known	Total
	4—50 per cent	8
	1—20 per cent	5
4—57 per cent	2—29 per cent	7
6—46 per cent	4—31 per cent	13
10—30 per cent	11—33 per cent	33

Of forty cases receiving treatment, 12 are known to be living 30 per cent; 12 are known to be dead 30 per cent; and no records are available for 16 40 per cent.

# Classification by ages when first seen:

Age	Number	White	Colored
23 to 30.....	6.....	3.....	3
31 to 40.....	9.....	4.....	5
41 to 50.....	15.....	8.....	7
51 to 60.....	11.....	6.....	5
61 to 68.....	5.....	4.....	1
Totals.....	46.....	25.....	21

The youngest patient was 23 years of age, colored and the grade of malignancy was III. The oldest patient was 68, was also colored, and died of cerebral hemorrhage about two years after treatment.

The average age for all patients was 46 years.

# TRI-PARISH MEDICAL SOCIETY

The Tri-Parish Medical Society held its regular monthly meeting in Lake Providence, Louisiana on

July 2, 1935. Following a most enjoyable dinner the members heard a very interesting program, each speaker choosing some diversion of the Parish Health Unit for his subject.

The following Guest Speakers were present:

Dr. G. D. Williams, Monroe, La., whose subject was "The Relation of a Full Time Health Department and the Practitioner.

Dr. F. S. Williams, Oak Grove, La., whose subject was, "Diphtheria Carriers and the Influence of Tonsillectomy on its Prevalence."

Dr. Norris, St. Joseph, La., whose subject was, "The Duties of the Health Unit Nurse."

Dr. E. S. Freeman, Tallulah, whose subject was, "The Relation of the Health Unit Laboratory, its Purpose and Value to the Director and the General Practitioner."

Dr. H. S. Smith, Guest Speaker from Lafourche Parish, whose subject was, "The Value and Accomplishments of the Health Unit."

Dr. F. V. Boyd, Lake Providence, La., whose subject was, "The Relation of the Health Unit to the General Practitioner."

G. Sanders Hopkins, M. D.,  
Secretary.

#### THE OSCAR ALLEN TUMOR CLINIC CHARITY HOSPITAL, NEW ORLEANS

The scientific meeting of July was called by Doctor J. T. Nix, Director. The essayist was Doctor Emmerich von Haam, who presented the following paper.

#### THE CYTOLOGICAL CONCEPTION OF CANCER

Our present understanding of cancer as an autonomic growth of cells, producing local tissue destruction, metastases and cachexia, seems to offer sufficient diagnostic signs in order to permit its recognition. However, our clinical experience teaches us that those cases which represent all the above stated characteristics are usually too far advanced and must be regarded as hopeless so far as any therapy is concerned. Our present methods of treatment promise success only in cases of malignancy, in which there has not yet been a general spread of the disease over the body, and early diagnosis of cancer must be regarded as the most important prerogative of any form of therapy.

In a previous article, biopsy was emphasized as the most successful method of early cancer diagnosis (von Haam). If performed by the hands of a skilled physician, it is a harmless procedure and permits a reliable diagnosis of very early cases of malignancy. I could also prove that the great value of a biopsy is not only in the early recognition of cancer but also in the prevention of the error of calling a benign lesion malignant and I expressed the opinion that the latter factor must be regarded under certain circumstances even as

the more valuable advantage of a biopsy in doubtful cases.

Our customary method of performing a biopsy consists in the excision of a small piece of tissue, usually chosen from the edge of the suspected lesion.

A histological section is prepared according to the usual frozen or embedded tissue technic. In studying those sections for the purpose of reaching a diagnosis, the pathologist will then make his observations along two principal lines: he will try to find out if the cells in the sections appear malignant and if the proliferation of the cells is typical for a malignant tumor. The latter observation is without doubt much easier to make and more reliable than the recognition of malignant cells and many pathologists consciously or unconsciously are solely guided in their diagnosis by the type of cell proliferation without paying much attention to the appearance of the cells themselves. Infiltrative growth of cells into the surrounding tissue with destruction of the tissue of the host, has already been mentioned as one of the characteristics, which defines malignancy and we certainly have no better way to study the beginning of this type of tissue invasion than with the microscope. Extensive proliferation of squamous epithelium into the underlying connective tissue with the formation of cell emboli in the small lymph and blood vessels will permit the diagnosis of cancer by means of low magnification without special study of the cells. Eorst emphasizes this "destructive cell proliferation" as the most characteristic sign of malignancy for which an equal in the normal histology of the organism can only be found in the growth of the chorionic villi into the wall of the uterus.

Although apparently easy and sufficiently reliable, the histopathological diagnosis of cancer by the destructive type of cell proliferation alone has one great disadvantage (Borst), in that it overlooks those very early cases of malignant growth in which there has not yet been a malignant invasion of the surrounding tissue by the cancer cells to any extent, cases which are most ideal for any therapy. From our study of the so-called precancerous lesions, however, we may rightly conclude that there exists a stage in the development of cancer in which certain cells possess a high degree of potential malignancy without any signs of aggressive proliferation, and the recognition of those "slumbering" cancer cells would be of inestimable value in combatting malignancy.

There also exists another reason which makes the cytological recognition of malignant cells desirable. Because of our desire to reduce the surgical risk of biopsies to a minimum, the excised piece of tissue should be as small as possible. From the tumors far beneath the surface of the skin only a punch biopsy with a trocar (Hof-



man's punch) or even only few cells in the lumen of an injection needle will be available for histological examination. Tumors in serous cavities are expected to be recognized by the pathologists from the cells in the exudate and repeatedly the pathologist is asked to diagnose the presence of malignant cells in smears made from the surface of a suspected lesion because the narrowminded patient resists even the smallest surgical intervention. It can easily be understood that no type of cell proliferation can be studied on those biopsies in which we can regard ourselves lucky if we receive single or small units of undamaged cells for examination. Our diagnosis must then depend solely upon the study of the cells.

Since Virchow's expostulation of the cellular theory of cancer numerous attempts have been made to discover characteristic stigmata of "cancer-cells". Ehrlich in 1882 was the first to suggest the examination of native slides or slides dried and stained with his blood stain for the diagnosis of cancer cells in exudates and excretions. He describes malignant cells as very large cells with large nuclei and extensive fatty degeneration and vacuolation. Widai and Ravaut in 1900 classified the various types of cell pictures obtained from exudates in serous cavities and suggested the "endothelial formula" as the characteristic cell picture for carcinomas. Koeniger emphasizes as the most important characteristic sign of cancer cells nutritional disorders with the appearance of fat droplets and vacuoles in the plasma of the malignant cells. Quensel, in reviewing the extensive literature, states that most of the authors agree on the following observations: That cancer cells as found in the exudates and various excretions including pus from ulcerated malignancies appear to be large in volume, irregular in form, with numerous vacuoles in the plasma and having nuclei which are always very large and often multiple. On the basis of his own extensive examinations, using a specially prepared Methylene-blue Sudan mixture for the stain of the cancer cells, he adds some important details in regard of the nucleolus. He found that the nucleolus of malignant cells is usually very large often measuring 3 to 4 microns in diameter.

Borst answers the question, "Does there exist any specific sign for malignant cells?", with an emphatic "No". However, he concedes that there are some morphological changes which may be very helpful in the diagnosis of a malignant tumor although their absence does not exclude cancer. Perhaps the most cited and studied phenomenon of malignancy is the presence of atypical mitoses in a large number of cells composing the parenchyma of malignant tumors. Hyper- and hypo-chromatic chromatin spindles in asymmetrical or multipolar grouping can be observed with many abortive forms of mitosis and amitosis. In careful measure-

ments and by methods of counting the number of mitoses, attempts were also made to differentiate more mature forms of malignant tumors from the more immature and clinically more progressive forms (Palugay).

The importance of those "atypical mitoses" for the diagnosis of cancer has been so much stressed in all textbooks that a fair warning seems to be justified. It is an established fact that we encounter many malignant tumors, especially in the group of sarcomas and lymphatic tumors, in which we are not able to observe any mitoses at all, typical or atypical. We must also remember, that atypical mitoses can be very easily produced by chemical agents, roentgen rays or other factors damaging the cells, without necessarily producing a malignant tumor. In tissues which are permitted to remain for several hours in room temperature before fixation, as this is the case in most of the autopsy material and in a great part of the surgical specimens, the cells will finish the process of mitosis and this factor may also explain the scarcity of mitoses in routine sections.

The size of the nucleus has been emphasized by Heiberg and his co-workers as important diagnostic characteristics. Although some malignant cells have without doubt small nuclei, he values the finding of enlarged nuclei throughout the lesion as strong proof of malignancy. His method of measurements however, must be regarded as too complicated for practical purposes and although his numerous pathological examinations together with the experimental findings of Epantschin justify his conclusions to some extent, the method will be only used in very special occasions.

Lately the reported changes in the size of the nucleolus have met with renewed interest. Observed as early as 1896 by Pianese we find it again a subject of interest in the work of Saxen, Stenius, Castren and Quensel. MacCarthy and his co-workers found by exact measurements that the nuclear nucleolar ratio in malignant cells changes due to the fact that the nucleoli increase more in size than the nuclei. Together with Alexander, I have studied this problem on an extensive scale and we were able to confirm in principle the observations of the above cited authors. How important this observation may prove for practical diagnostic purposes, I am not able to state at present as more systematic examinations are needed before any conclusions can be drawn.

Concerning changes in the plasma of cancer cells, we may state that all reported "specific stigmata" have so far been proven to be merely nonspecific degenerative changes or artefacts and that we are not able to use changes in the cell plasma for our differential diagnosis. The specific "birds-eye inclusions" of cancer cells are now explained as the result of multiplication of the centrosome com-

bined with certain secretory processes of the cells (Ewing) and are found very irregularly.

Although this short critical analysis demonstrates that all the characteristics of cancer cells which have been heralded as specific so far by various authors, have no diagnostic value or need much further proof, it can not be denied that most of the pathologists who have experience in the diagnosis of malignancies, have a strong impression of a marked difference between normal and malignant cells. Borst tries to characterize this ill-defined difference with the expressions of cell atypia and cell polymorphism in cancer. The great variability of cancer cells and their lack on differentiation form the most pronounced contrast to the uniformity and specific differentiation of normal cells of the organism. As more cells we study in each case, as better we will be able to observe the various types of cellular disorder which characterize a malignant growth. It will permit us to suspect the diagnosis of cancer in very early lesions or from cell smears without signs of local tissue invasion, until the problem of the cancer cell is solved.

#### BIBLIOGRAPHY

- M. Borst: Intern. Kongr. f. d. Bekämpfung des Krebses. Madrid, 1933.  
 Castren: Arbeit, aus dem Pathol. Inst. d. Univ. Helsingfors, 4:240, 1926.  
 Ehrlich: Charité Annalen, vol. 7: 199, 1882.  
 Ewing: Neoplastic diseases, Saunders, page 48, 1928.  
 v. Haam: New Orleans Med. and Surg. J., 87:153, 1934.  
 v. Haam, H. Alexander: Am. J. Clin. Path., in press.  
 Heiberg: Zeitschr. f. Krebsforsch. 29, 1929.  
 Koeniger: Die zytologische Untersuchungsmethoden, Fischer, 1908.  
 MacCarthy: Arch. Clin. Cancer Research, 1:11, 1925.  
 MacCarthy, Haumeder: Am. J. Cancer, 20:403, 1934.  
 Palugay: Zeitschr. f. Krebsforsch. 22:251, 1925.  
 Planes: Ziegler's Beitr. z. Path. Anat. Supplement, I, 1896.  
 Quensel: Zytologische Untersuchungen von Erguessen der Brust und Bauchhöhle etc. Uppsala, 1928.  
 Saxen: Arbeiten aus dem pathol. Inst. d. Univ. Helsingfors, 4:1, 1925.  
 Stenius: Ibidem, 3, 1923.  
 Widal, Revaux: Compt. rend. de la soc. de biol., 52:649, 651, 653, 1900.

#### J. T. NIX CLINIC

At a meeting held in July, Doctor Ruth G. Alexander presented the following paper.

#### MALIGNANT TUMORS OF CHILDHOOD

Most persons hold the belief that cancer is a disease occurring exclusively in late adult life and old age. This is true to a large extent in the strict sense of the word cancer, for physicians apply it only to those malignant growths which arise in the skin or in the lining membranes of the organs of the body. But the statement does not hold if one refers to all the malignant tumors that develop in the human organism, because unfortunately, the life of many individuals is snuffed out during the first two decades by the destructive activity of some of these growths.

Childhood has always been a period of trial—the time of exposure to the hazards and ordeals of successive bouts of acute illness. Thanks to the continued advances in preventive and curative measures, infectious diseases no longer take the toll of lives formerly exacted of our young children. The death rate from scarlet fever, diphtheria, malaria, typhoid fever and many other maladies, has been cut down to a small fraction of what it formerly was. The death rate from tuberculosis has also been markedly decreased. There is time now, therefore, for devoting our attention and exposing an entirely different sort of menace, heretofore kept in the background because the malignant tumors form a relatively small though by no means inconsiderable per cent of the great group of maladies which occur in children.

The supportive tissues of the body, such as bone and muscle, give rise to malignant tumors to which the word sarcoma is given, because of the fleshy appearance of some of these tumors, *sarx* meaning flesh in Greek. Sarcomas appear at any age, but are more likely to develop early in life, in young people, in children, even in infants, and though they are met less frequently than the cancer, they are more to be feared in that their progress is even more difficult to check.

The cancers of older people are sometimes seen in children. There is a case on record of a carcinoma of the stomach occurring in a boy four and a half years old, and another of a cancer of the rectum in a child of eight. This is so rare, so exceptional, as to have no practical importance, except as regards the kidney.

Cancer of the kidney, known as Wilms' tumor, is a disease of childhood. Its progress is so silent, that usually it is first noticed when a big lump has developed in the abdomen, or when a large amount of blood is seen in the urine. Such tumors can be controlled with heavy radiation with the roentgen rays, followed by removal of the affected kidney. Better results are dependent on the discovery of a method of detecting them earlier.

Probably the only growth of the nervous system of importance in childhood is one called neuroepithelioma of the retina. The retina is the inner coat of the eye, sensitive to light, the essential part for vision. This is one of the few tumors in which a true hereditary tendency has been noted. It has been observed in several generations of some families and in several children of the same parents. Often children are born with the tumor and usually it makes its appearance before the eighth year. Since the tumor develops inside the eye, and since the child is usually unable to complain of the change in vision, the tumor grows considerably before the parents are aware of it. If they are observant they may be able to notice a yellowish or reddish appearance in the pupil, or round opening of the eye. In this stage the con-

dition has come to be known as the amaurotic cat's eye. The only way of dealing with a condition such as this is to be radical. The eye must be sacrificed to save the child's life. To temporize is to condemn the baby. Lately, encouraging results have been obtained with roentgen rays and radium and it is to be hoped with greater experience more will be accomplished.

Tumors of bone are probably the type of malignancy found most often in children. The growth usually appears at the end of one of the long bones, especially the bones of the knee. Before any enlargement of the bone is seen, their presence is indicated by pain. This onset with pain is an exceedingly valuable feature of the disease because it should warn the family as to the seriousness of the condition with which the child is afflicted. This warning if properly heeded should serve to institute treatment early, when the chances of effecting a cure are greatest. It is regrettable that in the majority of cases pain is ignored for weeks or months, thereby sacrificing the opportunity for a victory over a type of sarcoma which is ruthless in its invasion and destruction of the vital structures of the body. Sarcoma of bone forgives no mistakes, and the gravest mistake one can make is to procrastinate. When a child complains of pain in a bone, one is inclined to dismiss the trouble as being due to a blow or a fall of recent occurrence, or to attribute it to rheumatism, or to call it "growing pains". But if it is very unsafe to be so vague. If a child complains in this manner the proper thing to do is to have him examined by a physician, and if the pain persists for a week, to get roentgen ray films of the bone. If no tumor is present, what a relief! If a sarcoma is found, it has been discovered in time to deal with it effectively. It is at this stage that the family must have the courage of following the treatment through to the extremes demanded by the gravity of the malady. Sacrifices will be demanded and must be made promptly with a stout heart. For the time lost in making decisions, and independently consulting several physicians, is irretrievable. To lose time is to lose a life. In cases of doubt or dissatisfaction with the opinion of the attending physician, the request for consultation is very gladly acceded to. He is as anxious as you are to get the benefit of other opinions without jeopardizing the life of the child. The handicap of the loss of a limb is quickly compensated in the early years of life. At the present time surgery offers the best chance in dealing with sarcoma of bone but the rapid progress of our methods of radiation argues well for the future.

It is very unfortunate that no other tumor produces pain at the onset. If malignant growths were ushered with severe discomforts our number of cures would multiply in a very satisfying manner. The rule, however, is for the condition to

grow silently producing vague, obscure discomforts of which an adult is barely aware, and which a child utterly disregards.

The child often carefully guarded against exposure to diseases prevalent in early life is ignored when he complains of pain in the bone because its significance is not known to his parents. Therefore, let us keep vigil in order that we may protect him, man's most precious possession from the ravages of this dreaded malady.

In closing, we would like to point out in a convincing manner that if all the cases of cancer might be seen early, diagnosed and treated at their beginning, the annual death rate of 150,000 people in the United States and Canada, would be reduced by at least thirty-three per cent a year.

#### HOTEL DIEU

The regular monthly meeting of the Hotel Dieu Staff was held June 17, 1935 in the Nurses' Lecture Room. Dr. Val H. Fuchs presided.

Dr. Max M. Green presented a case report "Interstitial Cystitis with Contracted Bladder Treated by Bilateral Ureteral Transplantation".

Interstitial cystitis is the ultimate result of a neglected cystitis. Just as a chronically neglected urethritis may become a periurethritis with resulting stricture of the urethra, so a neglected cystitis may become an interstitial cystitis with resulting fibrosis and contracture of the bladder. The contracted bladder analogous to a stricture of urethra is the end result.

A section of such a bladder according to Meads shows, in addition to inflammatory changes, marked fibrosis of tissues beneath the mucosa and great thickening of the blood vessels.

Meads classifies these cases into three groups:

1. Early; 2. Mid (Ulcer); 3. Late Stage.
1. *Early*: His cases show symptoms of persistent bladder irritability for four to thirty-six months.
2. *Mid*: Knife like pains in bladder—Suprapubic tenderness, nervous, suffering one to nine years.
3. *Late*: Complaining over a period of six to fifteen years. The symptoms having become almost unbearable.

This patient (G. W.) is not a case of Hunner's ulcer (typical), but has had a long standing systitis, possibly resulting from a chronically infected posterior urethra. We have little data on the upper urinary tract, as we haven't been able to catheterize the kidneys.

George W, colored male, aged 22 years, admitted to hospital for first time 4-10-34; discharged 5-2-34. *C. C.*: Pain over bladder and frequency of urination. *P. I.*: This patient had gonorrhea in March, 1933 and was given medicine to take by mouth by a druggist. Condition recurred in September. In December passed pus and blood in the



urine. Has seen blood clots in the urine off and on since associated with increased frequency and nocturia. Bowels are regular. No cough or pains in chest. *F. H.*: Negative. *P. H.*: Usual childhood diseases. *M. H.*: Married. *V. H.*: As above. *Physical Examinations* Negative, except for tenderness over lower abdomen. 4-12-34. Cystoscopy: Acute cystitis, contracted bladder. Culture of urine shows staphylococcus albus. *Wassermann*: Negative. *Blood Chemistry*: N. P. N. 29; urea nitrogen 14; sugar 104. Urine shows few pus and R. B. C. Impossible to get P. S. P. on account of urgency and very cloudy urine. *Readmitted* 12-24-34. Frequency and pain over bladder gradually became worse until November, 1934 when noticed blood in the urine and frequency (over 10 minutes) now. *Physical Examinations* As on previous examination.

1-3—Under sacral block cystoscopy was done. Acute cystitis and contracted bladder found. Both ureteral orifices seen, but unable to get even a bougie by.

1-16—Intravenous pyelogram showed dilated, elongated and ptosed right kidney, ureter kinked. Right pyelogram resembled bifid kidney pelvis. Patient continued to complain and begged that something be done to relieve him.

2-26—Right ureter transplanted into sigmoid according to Coffey technic No. 3. Ureter found dilated, making operation more difficult. Following operation patient did badly and apparently developed an ileus (rigid and distended). He had numerous infusions and general supportive measures. *Blood chemistry*: N. P. N. 85; Urea Nitrogen 40; Sugar 78.

3-8—Watery stools. Patient improved. Almost incontinency with burning in rectum. Diarrhea continued for about eight days when had to give bismuth to control it. Did well for next ten days.

Went home 4-29 to return in four to six weeks.

*Readmitted* 5-28-35. Gained weight at home, but wants to complete operation. Seems to have ureteral transplant done Coffey No. 3. Temperature up to 104° next day. Up 2-3 days.

5-28—Complained of pains in left kidney. Temperature 102°.

5-31—Temperature down, but patient slightly jaundiced.

6-5—Jaundice disappeared—Temperature 99°.

6-8—Intravenous pyelogram done. Shows both kidneys well, but ureters do not visualize as well as before operation. Both kidney pelvis dilated.

This patient is certainly much more comfortable now. He states that he has one normal stool a day with two to three watery evacuations daily. There is slight discomfort associated with the elimination of urine; otherwise he is feeling very well.

It may be necessary to do a cystectomy later, depending on the progress of the patient. He has no trouble with his bladder at present. No attempt at P. S. P. since operation.

This paper was discussed by Drs. Couret, Landry, Anderson, Levy, and Gately.

Dr. J. K. Howles presented "Precancerous Conditions of the Skin" accompanied by lantern slides.

The meeting then resolved into Executive Session and adjourned at 10 o'clock p. m.

## LOUISIANA STATE MEDICAL SOCIETY NEWS

### SOUTHERN MEDICAL ASSOCIATION MEETING

Allow me to inform or remind the profession of Louisiana, as well as our sister states, that the Southern Medical Association will meet in St. Louis this fall, beginning on November 19. It is perhaps superfluous for me to state here that this organization is the second largest in this country and that it deals, particularly, with problems of special interest to the doctors of the South. It has met three times in New Orleans and each of these meetings were marked by large attendance and much enthusiasm; last year, the convention in San Antonio was probably the largest on record. Our state has been honored three times by having one of our number selected as president, viz: the late Drs. Oscar Dowling and Isadore Dyer and Dr. C. C. Bass.

An excellent program of scientific interest, including "clinical sessions," is being arranged; in addition, the local profession and the Chamber of Commerce are making special efforts to provide

outside entertainment. It behooves us to go in large numbers, but, I am sorry to state, the membership from Louisiana is too small; every member of our state society should join the Southern, whether he intends to go or not, as the prestige of membership and the Southern Medical Journal, alone, are worth more than the amount of the dues.

FALL IN LINE, DOCTORS! I shall be glad to have your applications and, then, if possible, FALL IN LINE FOR THE BIG MARCH ON ST. LOUIS IN NOVEMBER!

Fraternally yours,

Arthur A. Herold.

Councilor for Louisiana.

Shreveport, July 12, 1935.

### MEDICAL NEWS

Dr. H. W. E. Walther, of the department of urology, of the Southern Baptist Hospital, delivered an address before the Teachers College in the San-



mer Session at Tulane University of Louisiana on July 16, his subject being "Social Diseases: a Personal and Community Problem."

Interne Curtis R. Chaffin. Relieved from duty at New Orleans, La., on June 29, and assigned to duty at the Marine Hospital, St. Louis, Mo. June 22, 1935.

Acting Assistant Surgeon J. T. Delougherty, Directed to proceed from St. Louis, Mo., to New Orleans, La., and report to the Medical Officer in Charge, Marine Hospital, for temporary duty for approximately two months beginning July 1. June 24, 1935.

The sixty-fourth annual meeting of the American Public Health Association will be held in Milwaukee, Wisconsin, October 7-10.

#### INFECTIOUS DISEASE IN LOUISIANA

Weekly morbidity reports from the Bureau of Epidemiology, of the Louisiana State Board of Health, furnished us by Dr. J. A. O'Hara, Epidemiologist, for the State, contained the following facts: During the week ending June 15, cancer, malaria, measles, pneumonia, pulmonary tuberculosis, syphilis, and typhoid fever, were all reported in double figures, with measles and syphilis heading the list, 90 and 49 cases respectively. There were seven cases of poliomyelitis, one in E. Carroll, 2 in Orleans and 4 in Pointe Coupee. One case of typhus fever was reported in Orleans. The following week, ending June 22, the 25th week of the year, there were reported 55 cases of malaria, 43 cases of pneumonia, 34 cases of pulmonary tuberculosis, 23 cases of syphilis, 21 cases of cancer, 20 cases of typhoid fever, 11 cases of scarlet fever and 11 cases of influenza. Three cases of poliomyelitis were reported. Eight cases of undulant fever occurred. In the week ending July 6, malaria headed the list with 68 cases. Forty-two cases of syphilis were reported, 3 cases of poliomyelitis, none in the Parish of Orleans. One case of rabies was reported in Natchitoches Parish. For the 28th week, ending July 13, malaria with 118 cases was again at the head of the list. Pneumonia cases increased from 31 to 47. There were 3 cases of poliomyelitis, one each in Lafourche, Orleans and Tangipahoa.

#### HEALTH OF NEW ORLEANS

The Department of Commerce, Bureau of Census, reports that for the week ending June 15, there were 157 deaths in the city of New Orleans of which 98 were white and 59 colored, with a group death rate of 17. The infant mortality was 12. In the week of June 22, the total deaths amounted to 141, 80 white and 61 colored. The infant mortality had risen to 16, 9 white and 7 colored. During the following week, June 29, the

total deaths amounted to 141 with a group death rate of 15.3. The infant mortality was 18 with the infant mortality rate of 107 as compared with the infant mortality rate for 1933 of 81. The total deaths during the week of July 6, were 141, divided 80 white and 61 colored and the infant mortality was 10, the infant mortality rate having dropped to 59.

#### WOMAN'S AUXILIARY

##### Louisiana State Medical Society

We are very much indebted and grateful to Mrs. Arthur A. Herold of Shreveport who was one of the Louisiana delegates, for the following report on the A. M. A. Auxiliary meeting held in Atlantic City, June 11-14. This is a splendidly written and most interesting report which all of you are going to enjoy reading:

"The joint meeting of the American Medical Association and the Canadian Medical Association held in Atlantic City this June brought out the largest gathering of doctors in the history of the world. Of course, we shared in this unusual event and our meetings, as far as I have been able to learn, were the largest and most enthusiastic Auxiliary meetings held since its inception. The registration was as follows:

National Board Members.....	38
Delegates .....	92
Members .....	730
American Guests .....	859
Canadian Guests .....	103
Grand Total .....	1822

The Post-Convention Board meetings were held on June 10, having two sessions; one morning and one afternoon, with a very enjoyable Board luncheon in between. It was at these meetings that the Constitution was read and discussed in detail, and finally put in proper form for the open meeting. At the general meeting, however, it was not read as time was precious and so many had already read it that it was voted to leave it as the Board had formed it and have it go in this form to the Advisory Council.

The two general meetings were held Tuesday and Wednesday mornings respectively. At these meetings, National Committee reports were read and all States having a representative had their reports read. The National Committee Chairman made many recommendations. Of those approved, I think the most important were the following:

Recommendations made by Organization Chairman:

1. That the States use more discretion in the selection of Organization Chairman.
2. In States where counties have less than ten doctors in the county that they organize into districts.

Recommendations made by Committee on Public Relations:

1. The continuation of the Public Relations Educational Program through Health Programs, Health Institutes and Essay Contests.

2. That Auxiliaries continue co-operation with local Parent-Teacher groups in their Health Programs by urging periodic health examinations of school children in the office of the family physician in preference to mass clinics.

3. The promotion of Hygeia Exhibits at County and State Fairs with Auxiliary members serving as hostesses and distributing A.M.A. health literature.

Recommendations from President of the Georgia Auxiliary:

1. That the National Auxiliary recommend to the States that each State observe annually, a day of appreciation of the struggles and sacrifices that the Medical Profession has made in the defense of human living throughout the ages—such a day to be called "Doctors' Day" and to be selected by each State in commemoration of some member or notable advance in the Medical Arts of that State.

I was especially interested to learn from the report of the Hygeia Chairman that there had been an increase in its subscription, eighteen out of thirty-eight states showing an increase.

There were many interesting points brought out in the State reports. So much interest was shown in them that it was decided to have mimeographed copies of them made immediately and sent to all State Presidents and Secretaries. Louisiana's report was very well written, for it left out all social and unimportant details and stressed her important activities. It was read by Mrs. Arthur A. Herold. Two new States have auxiliaries, namely, New York and North Dakota, making a total membership of 15,492.

The Memorial Service held Tuesday morning was very impressive and a special tribute was paid our beloved friend and neighbor, Mrs. Preston Hunt, who passed away while president of the Texas Auxiliary.

The following officers were elected for the coming year:

President, Mrs. Rogers N. Herbert, Tennessee  
 Vice-President, Mrs. J. Bonar White, Georgia  
 Second Vice-President, Mrs. Otis Floyd Lamson, Washington  
 Third Vice-President, Mrs. Elmer L. Whitney, Michigan  
 Fourth Vice-President, Mrs. Prentiss Wilsen, Dist. of Columbia  
 Recording Secretary, Mrs. Charles C. Tomlinson, Nebraska  
 Treasurer, Mrs. Eben J. Carey, Wisconsin  
 Directors One Year, Mrs. Arthur A. Herold,

Louisiana; Mrs. Fredrick N. Scatena, California; Mrs. Martin L. Stevens, North Carolina.  
 Directors Two Years, Mrs. A. J. Casselman, New Jersey; Mrs. L. M. Downing, Iowa; Mrs. John O. McReynolds, Texas.

The Social side of the meeting was almost perfect, for practically every form of entertainment was offered and each one carried out to the minutest detail. The Auxiliary luncheon held Wednesday was attended by an unusually large number of women for it was announced that an excellent program had been prepared. Those of us who were fortunate enough to attend this luncheon were not disappointed, for we were given a pleasant surprise in a visit from Dr. Dafoe. He told us many details about the quintuplets and answered all of our questions in a most charming manner. At this luncheon, we were also given an intellectual treat in an address by Dr. Leonard George Rowntree, Director of the Philadelphia Institute of Medical Research, who spoke for nearly an hour on "The History of Medicine." He spoke without a note, and his address was so scholarly and so well delivered that to all of us it seemed as if he had spoken only a few minutes.

It is impossible, on paper, to convey to you in even a slight degree the friendly spirit that prevailed at our Atlantic City meeting. My parting advice to you is to begin now to plan to attend our next meeting, which will be held in Kansas City, for only then will you be able to understand all that a National meeting means to an Auxiliary worker."

We hope that the foregoing report will be an incentive to all Auxiliary members to want to attend the Kansas City meeting next year. Let us all be thinking about it, what say?

Mrs. George D. Feldner, Chairman,  
 Press and Publicity.

#### OUACHITA PARISH

The Woman's Auxiliary to the Ouachita Parish Medical Society closed the 1934-35 session June 18 with a theatre party followed by an "at home" in the home of Mrs. D. T. Milam with Mrs. J. B. Vaughan, Mrs. J. P. Brown, and Mrs. W. L. Bendel co-hostesses, having as our honor guests the graduating class of nurses at the St. Francis Sanitarium. Every year the Auxiliary looks forward to their day with the Nurses and tries to make this day a gala occasion.

The following officers were elected and will resume their duties until the end of the fiscal year, March, 1936:

Mrs. J. Q. Graves, President  
 Mrs. C. P. Gray, First Vice-President  
 Mrs. W. L. Bendel, Second Vice-President  
 Mrs. L. L. Shlenker, Recording Secretary  
 Mrs. I. J. Wolff, Corresponding Secretary

Mrs. D. T. Milam, Publicity Secretary  
 Mrs. A. D. Tisdale, Treasurer  
 Mrs. C. H. Hill, Historian  
 Mrs. P. L. Perot, Parliamentarian

It seems as though our year ended rather quickly for we had so many things to accomplish. Yet in checking our projects we did find that the following are the most outstanding.

1. Contributions to the indigent physicians fund.
2. Contributions of literature and a book to the St. Francis Sanitarium Library.
3. Periodic health examinations.
4. Sponsors for the tubercular drive during which we distributed literature, provided physi-

cians to give lectures, and also free examinations.

5. Along our social lines we sponsored a dance given by the nursing staff of St. Francis Sanitarium—the proceeds being used in purchasing literature and books for the library. Several times during the year entertainments have been given for the Doctors and their wives which have proved most enjoyable.

We are looking forward to a better year and are hoping that numerous items can be added to our project list.

May the work of the Auxiliaries as a whole increase its value and succeed in accomplishing bigger and better things this ensuing year.

Mrs. D. T. Milam,  
 Publicity Secretary.

## MISSISSIPPI STATE MEDICAL ASSOCIATION NEWS

### FROM OUR PRESIDENT

Work is going forward for our Greenville meeting next May. Chairmen for the different sections have been appointed and a splendid co-operative response has come from these gentlemen indicating a successful meeting. They are:

Dr. W. H. Parsons, Vicksburg, Chairman of Section on Surgery.

Dr. H. L. McKinnon, Hattiesburg, Chairman of Section on Medicine.

Dr. B. D. Blackwelder, Hattiesburg, Chairman of Section on Hygiene and Public Health.

Dr. D. F. Cotton, McComb, Chairman of Section on Eye, Ear, Nose, and Throat.

A committee on Mutual Insurance has been appointed as follows: Drs. R. C. Elmore, Durant, R. W. Stevenson, Lexington, and Willis Walley, Jackson.

I ask that the secretaries of the respective component societies be on the lookout for outstanding papers and see that the author is invited to other societies that they may have the benefit of his efforts in preparing such a paper during this year. I believe this plan will increase interest with our local societies and enable the writer to realize a greater reward for his service.

J. R. Hill.

### SUGGESTED AGREEMENT BETWEEN MISSISSIPPI DOCTORS AND THE STATE WELFARE ADMINISTRATOR

1. A deputy with authority to give orders for visits and treatment shall be located near each active practitioner in the state, provided said practitioner is a member of the State Medical Association, so that he may easily contact her or him.

2. No doctor shall be given an order by a welfare worker unless he is an active member of the

county and district medical association where he resides.

3. The amount paid the doctor shall be \$2.00 for the first mile or fractional part thereof, and for calls beyond one mile, the amount paid shall be \$2.00 PLUS twenty-five cents per mile or fractional part thereof.

4. When the doctor visits a patient by order of the welfare worker, he shall report to the welfare worker the number of visits that will probably be necessary to be made. The welfare worker shall then give an order for such number of visits as the doctor and the welfare worker may agree upon. If at the consummation of the said agreement the doctor thinks that the patient needs further treatment, he shall contact the welfare worker and secure an agreement for additional visits.

5. Office calls shall be \$2.00

6. Obstetrical fees shall be \$20.00

7. Surgical fees shall be: minor operations, \$5.00; tonsillectomy, \$25.00; major operations, \$50.

8. Each county medical society shall elect a committee of three of its members whose duty it shall be to adjust differences between doctors and the welfare workers. If the above mentioned committee is unable to reach an agreement with the welfare worker the committee shall appeal the matter to the State Welfare Administrator.

9. If the welfare worker thinks that a doctor is unfair or dishonest, she may report the matter to the aforementioned committee of three who shall investigate the same. If the committee finds that the doctor is unfair or dishonest it shall so report to the county society. If the county society sustains the verdict of the committee, the offending doctor shall not be given another order by the welfare worker.

10. If any doctor attempts to influence a wel-

fare worker, by price cutting or by any other method to send patients to him or to give him orders, she shall report the same to the above mentioned committee, if the committee thinks that the doctor is guilty of said soliciting or price cutting, it shall so report to the county society. If the county society sustains, by majority vote of the members present, the opinion of the committee, the welfare worker shall not give the offending doctor another order.

11. The welfare worker may pay a reasonable fee for radiograms and for roentgen ray and radium treatments.

J. R. Williams.

#### PHYSICIANS LICENSED BY THE STATE BOARD OF HEALTH, JUNE 27, 1935

##### BY WRITTEN EXAMINATION:

Dr. Aubrey Anslem Aden, Valley Park; Dr. Allie McCune Arrington, Decatur; Dr. Woodard Davis Beacham, Hattiesburg; Dr. James Gilbert Blaine, Jackson; Dr. Francis Fairley Burton, (col.) Meridian; Dr. Joseph Ciolino, Greenville; Dr. Otis Brazel Crocker, Sarepta; Dr. Hugh Kimbriel Curry, Eupora; Dr. Sebron Culpepper Dale, Prentiss; Dr. William Colyn Golden, Walnut Grove; Dr. Paul Rogers Googe, Booneville; Dr. Everett Glenn Grantham, West Point; Dr. Wallace Arnold Hull, DeKalb; Dr. Robert Lee Johnson, Tupelo; Dr. John Morgan Kellum, Houston; Dr. William Henry Lacey, Holly Springs; Dr. Volney Richardson Liddell, Vicksburg; Dr. Onnie Preston Myers, Collinsville; Dr. Thomas Calvert Naugle, West Point; Dr. Joseph Glenn Peeler, Clinton; Dr. Wayne C. Pittman, Sweetman; Dr. Clarence D. Pritchard, Oxford; Dr. Emmett Ray, Kosciusko; Dr. Owen Royce, Jr., Isola; Dr. Gus Adolphus Rush, Jr., Meridian; Dr. Fred Monroe Sandifer, Jr., Greenwood; Dr. Earl Spinks Seale, Meridian; Dr. Robert Edward Stegall, Gulfport; Dr. Cecil Rhodes Waley, Jackson; Dr. Albert Gayden Ward, Jackson; Dr. Frank Alton Wood, Lena; Dr. Samuel Buford Word, Aberdeen.

##### BY RECIPROCITY:

Dr. Austin Howard Applewhite, Columbia, from Tennessee; Dr. Elton Langston Bolton, Biloxi, from Georgia; Dr. LeRoy Bloch Brackstone, Iuka, from Tennessee; Dr. George A. Carmichael, (col.); Canton, from Tennessee; Dr. Lee McDonald Lipscomb, Jackson, National Board Medical Examiners; Dr. John Clifford McGuire, Hazlehurst, from Kentucky; Dr. Thomas W. Meriwether, Senatobia, from Tennessee; Dr. James J. Pittman, Tylertown, from Louisiana; Dr. Cecil Cullen Smith, Indianola from Georgia; Dr. William J. Weatherford, Pascagoula, from Alabama; Dr. Lightfoot West, (col.) Horn Lake, from Tennessee.

#### MISSISSIPPI STATE BOARD OF HEALTH

Visitors to Mississippi to study the Public Health program are:

Mr. Enrique Volio of the Costa Rica Department of Health, who has been studying at the Harvard Engineering School, spent about two weeks looking over the sanitation work.

Dr. John K. Sphangos, a member of the faculty of the Athens, Greece, School of Hygiene, is spending the month of July studying the organization of the State Board of Health, the full-time county health work program, also public health nursing and malaria activities. Dr. Sphangos has been studying at Johns Hopkins University.

Dr. Alberto P. Leon of Mexico City, who has just completed a year's study at Harvard University, will spend all of July observing the Mississippi public health program. Upon completion of his studies, he will return to Mexico to a post in the public health service.

Mr. T. Y. Koo of the Central Field Station, Nanking, China, who has been studying sanitary engineering at the University of North Carolina, spent ten days in Mississippi viewing the malaria control and sanitation work.

Mississippi is complimented that these public health leaders from Mexico, Costa Rica, China, and Greece felt that it was worth while for them to spend time here. We hope their visit was pleasant and profitable.

Felix J. Underwood,  
Executive Officer.

#### DEATHS OF MISSISSIPPI PHYSICIANS

Dr. John Hillman McLain, Jackson, June.  
Dr. Sam Poole, Leakesville, June.  
Dr. S. E. Rees, Purvis, July.

#### MISSISSIPPI COUNTY HEALTH OFFICERS

JULY 1, 1935—JUNE 30, 1937

\*Adams—Dr. A. R. Perry, Natchez.  
Alcorn—Dr. R. E. Honnoll, Corinth.  
Amite—Dr. C. W. Stewart, Osyka.  
Attala—Dr. C. A. Pender, Kosciusko.  
Benton—Dr. Frank Ferrell, Ashland.  
\*Bolivar—Dr. R. D. Dedwylder, Cleveland.  
Calhoun—Dr. F. L. McGahey, Calhoun City.  
Carroll—Dr. M. E. Arrington, Vaiden.  
Chickasaw—Dr. J. Rice Williams, Houston.  
Choctaw—Dr. J. James, Ackerman.  
Claiborne—Dr. W. N. Jenkins, Port Gibson.  
Clarke—Dr. W. C. Norris, Quitman.  
Clay—Dr. J. E. Ellis, West Point.  
\*Coahoma—Dr. N. C. Knight, Clarksdale.  
\*Copiah—Dr. J. C. McGuire, Hazlehurst.  
Covington—Dr. G. T. Cranford, Seminary.  
DeSoto—Dr. A. L. Emerson, Hernando.  
\*Forrest—Dr. B. D. Blackwelder, Hattiesburg.



Franklin—Dr. J. C. McGehee, Bude.  
 George—Dr. R. F. Ratliff, Lucedale.  
 Greene—Dr. A. Graham, Leakesville.  
 Grenada—Dr. T. J. Erown, Grenada.  
 \*Hancock—Dr. C. M. Shipp, Bay St. Louis.  
 \*Harrison—Dr. D. J. Williams, Gulfport.  
 \*Hinds—Dr. W. E. Noblin, Jackson.  
 \*Holmes—Dr. C. C. Smith, Lexington.  
 \*Humphreys—Dr. J. W. Barkley, Belzoni.  
 Issaquena—Dr. T. W. Huey, Grace.  
 Itawamba—Dr. N. W. Nanney, Fulton.  
 \*Jackson—Dr. R. G. Lander, Pascagoula.  
 Jasper—Dr. C. E. Burnham, Bay Springs.  
 Jefferson—Dr. W. H. H. Lewis, Fayette.  
 Jefferson Davis—Dr. G. C. Terrell, Prentiss.  
 Jones—Dr. T. R. Beech, Ellisville.  
 Kemper—Dr. V. M. Creekmore, DeKalb.  
 Lafayette—Dr. E. S. Bramlett, Oxford.  
 \*Lamar—Dr. J. N. Mason, Purvis.  
 \*Lauderdale—Dr. D. V. Galloway, Meridian.  
 Lawrence—Dr. T. F. Conn, Monticello.  
 Leake—Dr. W. S. Martin, Carthage.  
 \*Lee—Dr. W. H. Cleveland, Tupelo.  
 \*Leflore—Dr. L. A. Barnett, Greenwood.  
 \*Lincoln—Dr. W. R. May, Brookhaven.  
 Lowndes—Dr. C. E. Lehmberg, Columbus.  
 Madison—Dr. John B. Howell, Canton.  
 Marion—Dr. D. A. Ratliff, Columbia.  
 Marshall—Dr. Ira B. Seale, Holly Springs.  
 \*Monroe—Dr. Chas. H. Love, Aberdeen.  
 Montgomery—Dr. J. P. Synnott, Winona.  
 Newton—Dr. W. A. McMahon, Union.  
 Neshoba—Dr. W. L. Watkins, Philadelphia.  
 Noxubee—Dr. E. M. Murphey, Macon.  
 Oktibbeha—Dr. J. F. Eckford, Starville.  
 Panola—Dr. A. P. Alexander, Como.  
 \*Pearl River—Dr. G. E. Godman, Poplarville.  
 Perry—Dr. B. T. Robinson, New Augusta.  
 \*Pike—Dr. T. P. Haney, Jr., McComb.  
 Pontotoc—Dr. R. P. Donaldson, Pontotoc.  
 Prentiss—Dr. W. H. Anderson, Booneville.  
 Quitman—Dr. A. C. Covington, Marks.  
 Rankin—Dr. J. B. Ainsworth, Florence.  
 Scott—Dr. W. E. Anderson, Forest.  
 \*Sharkey—Dr. A. K. Barrier, Rolling Fork.  
 Simpson—Dr. R. E. Giles, Mendenhall.  
 Smith—Dr. W. M. Coursey, Raleigh.  
 Stone—Dr. S. E. Dunlap, Wiggins.  
 \*Sunflower—Dr. H. E. Cottrell, Indianola.  
 Tallahatchie—Dr. G. L. Biles, Sumner.  
 Tate—Dr. J. S. Eason, Coldwater.  
 Tippah—Dr. C. M. Murry, Ripley.  
 Tishomingo—Dr. T. P. Haney, Iuka.  
 Tunica—Dr. W. H. Williams, Tunica.  
 \*Union—Dr. Irving B. Trapp, New Albany.  
 Walthall—Dr. B. L. Crawford, Tylertown.  
 \*Warren—Dr. F. Michael Smith, Vicksburg.  
 \*Washington—Dr. J. W. Shackelford, Greenville.  
 Wayne—Dr. W. P. Gray, Waynesboro.  
 Webster—Dr. W. H. Curry, Eupora.

Wilkinson—Dr. C. E. Catchings, Woodville.

Winston—Dr. H. B. Watkins, Noxapater.

Yalobusha—Dr. R. J. Criss, Coffeetown.

\*Yazoo—Dr. H. L. McCalip, Yazoo City.

\*Counties having full-time health departments.

# TUBERCULOSIS ABSTRACTS NATIONAL TUBERCULOSIS ASSOCIATION TUBERCULOSIS IN THE CHILD

## INFANCY TYPES:

In infancy the primary focus gives few physical signs. A transient unexplained fever and perhaps failure to gain well are its only symptoms. In fact the element of surprise is the predominant note in nearly all infantile tuberculosis. The following types may be distinguished.

1. Tracheobronchial adenopathy of large extent. Such infants usually have fever and do not gain well. The chest shows practically no signs. The roentgen ray gives a wide supracardiac shadow, often rounded outlines on one side or both, suggesting nodes.

2. Cases of "marasmus." There may be a story of feeding difficulty, but many infants do well at first and then begin to fail. Routine roentgen ray should be done on all such patients and may reveal definite tuberculosis in the lymph nodes or wide dissemination, or even large cavities.

3. Cases simulating pneumonia. Fever, prostration, cough and physical signs of consolidation or with crackling, resonant rales at the bases suggesting bronchopneumonia. These infants may be emaciated but are often fairly well nourished. The roentgen ray shows mottled shadows over part or all of the pulmonary fields, indicating bronchogenic disseminated tuberculosis or localized consolidation much like a lobar pneumonia.

4. Unexplained high fever, without local signs, often turns out to be disseminated pulmonary or generalized tuberculosis.

5. A final group includes the cases which are definitely suspected of tuberculosis from the outset.

Physical examination of the lungs is often most unsatisfactory in small children. The stethoscope is the least useful instrument at our disposal in the tuberculosis seen in childhood. The roentgen ray may reveal large lesions in cases where no signs whatever can be elicited either before or after seeing the film. In all the acute and exudative forms of tuberculosis there is a leukocytosis.

## OLDER GROUPS:

Older children with a positive skin test, fall into the following groups.

1. Recent infections in those who have been infected within two years or less, that is, those who have a fresh primary complex.

2. Those who show calcification in the hilus region of the lung, perhaps a calcified primary focus in the parenchyma.

3. Children who have been infected more than two years who have healed their lesions by resolution and show no calcification.

4. A few who have definite pulmonary tuberculosis.

5. A few who have non-pulmonary tuberculosis in mesenteric nodes, cervical nodes, bones, kidneys or skin, etc.

It is important to determine whether the disease is active or not, since this is the keynote of treatment. Constitutional symptoms are more significant than roentgen ray findings or physical signs. The better way is to test the children first, then roentgen ray the positive reactors and in addition seek for signs of activity in all, regardless of the roentgen ray findings.

The clinical picture of activity is characteristic and quite obvious to a trained observer. The symptoms and signs are few but added together should be enough to arouse suspicion of what is happening to the child. Fever is an almost constant sign of activity; that is, a rectal temperature which rises above  $100^{\circ}$  nearly every day. Temperatures under  $100^{\circ}$  may be disregarded in childhood. The fever is irregular, rising to a different level on different days. The highest point may be at any time of day or even in the middle of the night. The great irregularity is characteristic.

Failure to gain weight at the proper rate, (if due to malnutrition) is always a suspicious sign. No other disease seems to exercise so prompt an effect on the nutrition in childhood. Gain in weight may occur in adults with advancing lesions, but is rarely seen in children. There is often secondary anemia.

In infancy, fever, loss of weight, with or without persistent signs in the lung, should suggest tuberculosis. Of course, bone disease and meningitis always do so. A Mantoux test, the roentgen ray and carefully recorded temperatures and weight curves are necessary to complete the diagnosis.

In older children, failure to gain, langour, fatigability, a low transmission of the tracheal whisper and hypertrichosis are suggestive. Phlyctenules, tuberculosis or other local diseases may be the first sign. With a positive Mantoux, fever is significant of activity even with a normal roentgen ray.

In the diagnosis of tuberculosis three questions should always be kept in mind.

First. Has the child been infected with tuberculosis? Answered by the Mantoux test.

Second. What is the site of the disease? The answer may be given by the symptoms, physical examination and roentgen ray films. All of these may be practically negative, but in this event the mediastinal nodes are probably the site of the disease, since they are involved in most primary in-

fections, or secondarily to some degree even when the primary complex is elsewhere.

Third. Is the disease active, stationary, or cured? This must be judged by general symptoms, fever, the effect on the nutrition and by any signs or symptoms of local activity.

#### ADAMS COUNTY MEDICAL SOCIETY

The regular June meeting of the Adams County Medical Society was held at the Natchez Charity Hospital, June 18, with nine members present.

There being no regular program the meeting was given over to round table discussion of clinical cases.

W. K. Stowers,  
Secretary.

#### COAHOMA COUNTY MEDICAL SOCIETY

The Coahoma County Medical Society and the Clarksdale Hospital Staff met at the Clarksdale Hospital in regular monthly meeting June 12, 1:30 p. m. The meeting was called to order by the president, Dr. W. S. Slaughter, with an attendance of over 62 per cent of the paid up membership. The secretary called the roll and read the minutes of the previous meeting as directed by the president, the minutes being adopted as read.

There being no committee reports nor old business to come before the house, new business was taken up at this time. Dr. E. LeRoy Wilkins gave a short report on the first lecture of the post-graduate course in obstetrics, conducted by Dr. Maxwell E. Lapham which was started in Clarksdale, June 10. Dr. Wilkins stated that the lecture and clinic were very interesting, the attendance good, and that he thought the course promised to be a good one.

Dr. T. M. Dye then made a motion that the secretary draw up resolutions expressing the Society's regret and sincere sympathy in the recent misfortune of Dr. T. G. Hughes and that said resolutions be forwarded to Dr. Hughes, who is a member of this Society. The motion was seconded by Dr. E. LeRoy Wilkins and passed unanimously.

The county health officer, Dr. N. C. Knight, then read a letter from the state health officer, Dr. Felix J. Underwood, setting forth the policies for full-time health officers to follow; such policies instructing the health officer to deal entirely with preventive medicine and public health and leave curative medicine to the general practitioners and specialists.

The county health officer, Dr. N. C. Knight, then presented the matter of holding another tuberculosis diagnostic clinic in Clarksdale during the week beginning September 9, under the direction of the Coahoma County Health Department and conducted by Dr. W. D. Hickerson, and asked for

disposal of same by the Society. Dr. E. LeRoy Wilkins then made a motion that the services of this clinic be secured at any time that they were available. The motion was seconded by Dr. S. P. Robinson. Quite a bit of discussion favorable to holding the clinic followed, all members present expressing themselves as being heartily in favor of such clinics. The motion was carried unanimously.

Dr. E. LeRoy Wilkins and Dr. T. M. Dye, representatives to the Mississippi State Hospital Association then made a short report on the meeting of the Association at Biloxi last month, which was the annual meeting of the Association held in conjunction with the Louisiana State Hospital Association and the Mississippi State Medical Association.

The election of officers for next term being the next order of business, same resulted as follows: President—Dr. W. S. Slaughter, Jonestown—Re-elected.

Vice-President—Dr. D. O. Pierce, Jonestown—Re-elected.

Secretary—Dr. N. C. Knight, Clarksdale—Re-elected.

The scientific session was next in order as follows:

"Carrier of the Diphtheria Bacillus"—Case Report.—D. O. Pierce

Discussion by N. C. Knight, E. LeRoy Wilkins, S. D. Robinson, T. M. Dye, W. S. Slaughter. Closed by D. O. Pierce.

"Sickness Insurance"—T. M. Dye, Clarksdale

Discussed by S. D. Robinson, W. H. Brandon, E. LeRoy Wilkins. Closed by T. M. Dye.

The next meeting will be held the second Wednesday in July at the Clarksdale Hospital. Speakers on the program will be D. H. Griffith and J. L. Levy.

N. C. Knight,  
Secretary.

#### ISSAQUENA-SHARKEY-WARREN COUNTIES MEDICAL SOCIETY

A regular monthly meeting of the Issaquena-Sharkey-Warren Counties Medical Society was held on Tuesday, June 9, at the Elks Club, Vicksburg, with eighteen members and two guests present. Dr. F. Michael Smith, president, presided. After a supper served at 7 P. M., the following program was presented.

Urology—Dr. Guy P. Sanderson, Vicksburg, Chairman.

(1) General Problems of Urology—Dr. Julian T. Bailey, Meridian (Exchange Essayist from East Mississippi Medical Society).

Discussed by Drs. T. P. Sparks, Jr., A. Street and G. P. Sanderson. Dr. Bailey Closed.

(2) Urethral Stricture.—Dr. T. P. Sparks, Jr. Discussed by Drs. A. Street, Julian T. Bailey, and F. M. Smith. Dr. Sparks closed.

(3) Spinal Anaesthesia (Motion Picture)—Courtesy of the Winthrop Chemical Company, Inc., New York.—Shown by Dr. Walter E. Johnston.

The next meeting of the society will be held Tuesday, August 13, at the Elks Club, Vicksburg. The subject will be General Practice and the committee in charge consists of Drs. W. C. Pool, Cary, chairman; G. W. Gaines, Tallulah; J. S. Ewing, Vicksburg; J. B. Benton, Valley Park; E. B. Stribling, Rolling Fork. The speakers will include Dr. J. G. Archer, Greenville, and Dr. G. W. Gaines, Tallulah, Louisiana. A Motion picture, "Malaria," will be presented by courtesy of Winthrop Chemical Co., Inc.

#### NORTHEAST MISSISSIPPI THIRTEEN COUNTIES MEDICAL SOCIETY

The Northeast Mississippi Thirteen Counties Medical Society held its second quarterly meeting at the Methodist Church of Houston June 18, with about 100 doctors in attendance. The society was very fortunate in having Dr. J. B. McElroy of Memphis as guest speaker. He delivered a most interesting and helpful address on "Some of Our Common Diseases of the Heart." The other program consisted of papers on "Toxemias of Pregnancy," by Dr. F. L. McGahey, Calhoun City; "Transfusions," by Dr. J. G. Lilly, Tupelo; "Empyema," by Dr. L. B. Morris, Macon; and "A Case Report on Madelung's Deformity," by Dr. J. T. Davis, Corinth. All these were splendid papers and were fully discussed by the doctors present.

Out of the territory guests were Drs. J. A. Crisler, Sr., and Harley Harris, Memphis, and Dr. Walter Friday, Health Surgeon of the Panama Canal.

Following the scientific program, the doctors of Houston were hosts at a delicious banquet served in the Masonic Dining Room. Dr. V. B. Philpot in his eloquent manner presided. The writer had the pleasure of introducing the very beautiful Mrs. J. F. Eckford of Starkville, who rendered lovely vocal solos during the dinner hour.

W. C. Walker.

#### NORTH MISSISSIPPI MEDICAL SOCIETY

A quarterly meeting of the North Mississippi Medical Society was held at Stafford's Cafe, Holly Springs, July 17, beginning at 6:30 P. M.

The program as announced by the secretary, Dr. A. H. Little, Oxford, was as follows:

1. Invocation.
2. Supper.
3. Minutes of Previous Meeting.
4. Diarrheas.—Dr. E. C. Mitchell, Memphis. General discussion.



5. The Conservative Treatment of Surgical Lesions of the Kidney (Lantern slides).—Dr. Thomas D. Moore, Memphis.

General discussion.

Dr. W. W. Phillips, Oxford, president presided.

#### TALLAHATCHIE COUNTY MEDICAL SOCIETY

The Tallahatchie County Medical Society met Friday evening, July 5, at seven o'clock at Sumner. A delightful dutch supper was served at the hotel after which a general discussion and social hour was enjoyed by all present. There were about a dozen present. Our attendance continues good and all who attend seem to enjoy the meetings. The fellowship developed at these meetings is one of the greatest assets.

J. W. Moody.

#### ADAMS COUNTY

Here is my bit for next issue of the Journal.

In last issue of the Journal our dear, beloved Dr. Bryan wrote a splendid report of his trip to the coast, to attend the meeting of the State Medical Association held in May. Those of us who could not go, it made us real homesick to read such a splendid article.

You are right, Dr. Bryan. The coast is alluring, fascinating. I have been going over since I was a boy 12 years old, and always enjoy every trip.

I am in receipt of three separate letters in the recent few days from three of our well known physicians, asking me to support a particular friend for the office of governor. According to my way of thinking, it may be well for the State Medical Association to decide what is for the best interests of the medical profession and its patients, appoint a committee to call on each man running for Governor, and support the man that will give the most attentive ear to its desires.

Looks like the State Medical Association is being forced into politics, but it is time for the medical men to co-ordinate as a whole to get a better chance to obtain what they desire. Acting as individuals, they can get nothing or very little.

Lucien S. Gaudet.

#### CHICKASAW COUNTY

Dr. J. M. Hood, Houka, reports two cases of meningococcus meningitis in his community occurring within two days of each other. Since no subsequent cases have developed, the fear of an epidemic has subsided.

Mrs. J. Rice Williams, Houston, has just returned from a visit to Washington, New York, Atlantic City, and other points in the east. While in Washington she was the guest of Mr. and Mrs. Jeff Busby.

Miss Glynn Brown, operating room supervisor at the Houston Hospital, left the institution on July 1 to accept the position of superintendent of a hospital in Kennedy, Texas.

We are glad to report that Dr. J. J. Landreth, Bruce, is able to be up following a serious automobile accident several weeks ago, for which he was treated some ten days in the Houston Hospital.

Misses Jeanette Hood and Grace Philpot, daughters of prominent Chickasaw County physicians, left recently for a two months' vacation at a girls' camp in North Carolina.

Master Van Philpot, the young son of Dr. and Mrs. V. B. Philpot, Houston, had the misfortune of sustaining an injured foot by being struck by a car while riding his bicycle.

Dr. Morgan Kellum, after finishing Emory University School of Medicine, spent a few days with his family in Houston before returning to Atlanta, Georgia, where he has accepted an internship at Grady Hospital.

Dr. H. A. Gamble, Greenville, president of the Mississippi State Hospital Association, was a pleasant visitor in Houston one day last week. Dr. T. M. Dye of Clarksdale, secretary of Mississippi State Medical Association, was also a recent appreciated visitor to Houston.

Dr. and Mrs. G. G. Armstrong, Houston, are rejoicing over the arrival of a grandson born to Mr. and Mrs. L. A. Ross of Clarksdale.

W. C. Walker.

#### COAHOMA COUNTY

Dr. W. S. Slaughter, Jonestown, president of the Coahoma County Medical Society, recently had as his guests in his home his daughter-in-law and children who enjoyed a most delightful visit. They are the wife and children of Dr. W. L. Slaughter, who is practicing in Arkansas.

We are happy to report that our good friend and brother, Dr. T. G. Hughes, is recovering very rapidly from his recent accident. He is up and about on his crutches now and we are looking for him to be back on the job soon. We are all happy for him.

The postgraduate course in obstetrics, being conducted by Dr. Maxwell E. Lapham, is progressing nicely and with a mighty good attendance. We all feel that Dr. Lapham is really giving us something worth while and we are turning out for it and all taking it in. The committee on clinical material, whose chairman is Dr. T. M. Dye, apparently is functioning nicely as adequate patients are being supplied to Dr. Lapham for his demonstrations.

Dr. E. LeRoy Wilkins, with other Legionnaires from Coahoma County, attended the American Le-



gion Convention held in Tupelo the latter part of June. He reports a mighty good time, and we believe that he must have had one, even if he did return with a lacerated lip.

Dr. J. L. Levy and family moved into their beautiful new home on West Second Street the latter part of June, where they are at home to their many friends.

Dr. N. C. Knight was a business visitor to the State Board of Health in Jackson during the latter part of June.

A dental hygienist, Miss Emily McQueen, was added to the staff of the local health department the first of June for a temporary period of time. Miss McQueen has been working among the children of the Clarksdale city schools during the month and is functioning nicely.

The nursing staff of the health department, composed of Miss Mary Gene Carney, Miss Mercedes McConnell, and Miss Abbie G. Hall, attended the Conference of Public Health Nurses held in Jackson, July 1, 2, and 3.

Dr. I. W. Barrett returned the latter part of June, and resumed his practice, from attending the convention of the American Medical Association in Atlantic City and from an extended trip on up through the East, including New York City. Dr. Barrett reports a most pleasant and profitable trip, and so far we have not doubted his word.

N. C. Knight.

#### COPIAH COUNTY

Dr. William D. Hickerson, Sanatorium, held a tuberculosis clinic in Crystal Springs and Hazlehurst the first week of July. He examined and made roentgenograms of fifty suspects and contacts. These cases were referred to the clinic by the family physicians. Out of the fifty cases, seven were definitely positive and two were suspicious cases. Much good was accomplished and it is hoped that Dr. Hickerson can return to Copiah County in the near future.

Dr. J. F. Scarborough, Hazlehurst, is improving from his recent illness.

Dr. A. V. Hunter, Crystal Springs, has returned home from the hospital and is rapidly recovering from his recent operation.

J. C. McGuire.

#### DESOTO COUNTY

The Louisiana State Medical Society Memorial Address by Dr. James T. Nix of New Orleans was indeed notable. The names of the deceased are arranged alphabetically and a brief history of them are recorded. I like this method of honoring our dead, "who knew no service too hard, no sacrifice too great when suffering humanity called."

Recently one of my clientele called me over the

telephone telling me to be at his home at 12:30 P. M. I was there on time, and caught the aroma of good things from the kitchen. Anon the good mistress called us to dinner. We call it dinner here not lunch. A dinner indeed it was, fried chicken, iced tea, four kinds of vegetables, salads, etc., then raspberry ice cream. Oh boy!

Before leaving he gave me \$10.00 saying, "credit my account." These words are always good to hear. What a day!

That night I was called to a place where I once lived 30 miles away to an obstetrical case. Poor whites, nothing of value in their hut but the forms of eight children of varying ages. The ninth was soon delivered. They were appreciative of services rendered. I was glad that I was able to be of assistance. The accoucheur's fee was nil.

Drs. A. L. Emerson and D. V. Funderburke have resumed their work after brief spells of illness.

Charles Whitley is the name of the second child born to Dr. and Mrs. C. W. Emerson of Hernando. The young man was born July 1. Mrs. Emerson is the daughter of Dr. and Mrs. L. W. Dotson of West Point. Dr. A. L. Emerson is the paternal grandfather. Peggy, Charles Whitley Junior's little sister, is the happiest of all the family.

The State Board of Health is dispensing with the local registrars, having one for the entire county at the county site. This may be the best for counties with cities or larger towns but in strictly rural counties I doubt the wisdom of this move.

Some deaths, births and more stillbirths will go unrecorded, especially where there is no physician in attendance and likewise no undertaker which is quite often the case.

I have been a local registrar for a number of years and knowing all in my district I find it difficult to get around 100 per cent registration.

L. L. Minor.

#### LEFLORE COUNTY

In giving the list of visiting physicians to our Delta Medical Society meeting in Greenwood, April 10, I overlooked the name of Dr. V. B. Philpot, Houston. Dr. B. B. Harper, Itta Bena, called my attention to this and I am sorry I did not see the doctor.

Drs. L. B. Otken and F. M. Sandifer visited Jackson, Geo. 6.

Dr. Geo. Baskervill visited relatives in Alexandria, La., June 9.

Dr. Claude Yates, Philadelphia, visited his mother and brothers in Greenwood, June 19.

Dr. L. B. Otken was elected Commander, American Legion, at this place recently, and his wife, Mrs. L. B. Otken was elected President, American Legion Auxiliary.

Mr. D. T. Sayle, Jr., Greenwood, son of Dr. D. T.

Sayle, Highlandale, was married to Mrs. Mabel Humphries Pentecost, Greenwood, June 14.

Dr. and Mrs. B. B. Harper, Itta Bena, recently visited New Orleans.

Mary Hunter Steele, little granddaughter of Dr. and Mrs. E. W. Hunter, Greenwood, suffered a fractured right radius when she was thrown from a horse while riding on June 26.

Mr. and Mrs. Harry Diman, Harry Jr., and Billy Diman of Boston, Mass., and Mr. Sam Burkhalter, Jr., of Atlanta, Ga., visited in the home of Dr. and Mrs. W. A. Burkhalter, Greenwood, the first week in July.

Dr. Robert Dickins, Monticello, Ark., visited his parents Dr. and Mrs. W. B. Dickins, July 4.

Dr. Tate Carl, Memphis, visited his home here on July 4.

Mr. and Mrs. William K. Turner, Black Hawk, announce the arrival of a son, Wm. K. Turner, Jr., born July 5, Greenwood Leflore Hospital. Mrs. Turner, formerly Evelyn Sayle, is the daughter of Dr. and Mrs. D. T. Sayle, Highlandale, Leflore County.

We are glad to hear that Dr. T. C. Kelly, Sidon, is very much improved after a recent illness. Dr. W. M. Duke is also up again after a recent illness. Dr. Duke lives up at Sunny Side above here.

Mrs. J. D. Sweaney, Minter City, who has been quite ill is about well again.

Mrs. J. P. Bates, Greenwood, who suffered recently from a fracture of the hip, has been moved to her home from the hospital and is doing nicely.

W. B. Dickins.

#### MONROE COUNTY

The editor's monthly request for news items has reached my desk. This time it is in questionnaire form. I will answer (or try to answer) his questions seriatim. First I will say that so far as I know none of my doctors have contemplated a vacation. All of them who are not on the relief roll, and consequently are unable to go vacationing, are too busy giving free medical care to those who are on relief (and many who are not on relief) to find time to take a much needed rest. Horses are, by many, considered as being human, but doctors seem not to be so considered. Only twice have I, during a medical career that includes a rather long stretch of time, taken a vacation. Some thirty years ago I spent, with my family, a few weeks in the far west. Again, some twenty years ago I spent a very delightful week as the guest of the Greenwood Hunting Club down on the Quiver River. I did not see a deer but I renewed old friendships and formed new ones. Across these years my memory reaches and brings much pleasure. I was the special guest of two

doctor friends. One still lives and one is dead. I love them both. I refer to Dr. S. L. Brister, Sr., who is living, and to Dr. Humphries, who is dead.

Replying to the question, "have you any ideas in regard to medical economics," I will say that I am constrained to say, in the words of the agriculturalist, "there ain't no sich animal." Perhaps the equation might be stated this way "much work equals no pay;" or "all work and no pay." There are, and will continue to be "a few notable exceptions," but the rule may be considered as general, that medicine is a losing business. Of the two hundred or more plans submitted for consideration by the A.M.A., none are capable of solving the riddle. I do not believe that any plan that may be devised and adopted by doctors will meet the demands of the varying conditions as found in different locations or sections of the country. Doctors have always done some free practice—they always will—perhaps they always should. The only relief that I can conceive of will come if and when the kings of finance are stopped from juggling values. Then and not till then will employment be found for all and fair and honest wages paid for work and fair and honest prices be obtainable for commodities that are but the fruits of honest toil. When, and if, this ever happens doctors will care for all the sick and the people will gladly recompense them for their service.

Question No. 3: "What should be the attitude of the Association in regard to medical service for persons on relief?" Listen to, and consider, my answer. I speak for myself—I think I am right. I am willing, as I have always been, to work for all who are not on relief, but I am not willing to work for anyone who is on relief, at cut rates. If the government has adopted them they should care for them and not expect doctors to share the expense. They pay full price for all other things needed and furnished. Why should the government discriminate against us? Should this attitude and rule of action become general, then the government will see and rectify its course. You say this is Utopian—perhaps it is; for doctors are human and scabs (excuse the word) are frequently found in our ranks. You asked for my opinion—you have it. It is yours for the taking.

I attended the June meeting of our county society last night at Aberdeen. About half the doctors in the county were present. Two of my doctors are in hospital sick. Dr. C. H. McCown of Aberdeen is seriously sick—has been in hospital for about a week. His brother Dr. O. S. McCown of Memphis was with him yesterday. I saw him last night. He is, indeed, the best type of man I know. He is a safe doctor and a perfect gentleman. I hope that he may be much improved long before this goes into print. Dr. I. P. Burdine, Jr., is in

Gilmore Sanitarium in Amory—he is suffering from furunculosis. He will, no doubt, be out within a few days. No other news now. Next meeting of our county society will be held in Amory on first Monday night in August.

G. S. Bryan.

#### PANOLA COUNTY

Dr. A. J. McIlwain and wife, Batesville, spent their vacation on the gulf coast.

The meeting at Pontotoc of the county registrars and deputies for North Mississippi was well attended and several of the county health officers were present.

Dr. A. P. Alexander, Como, was recently appointed health officer for Panola County. Dr. Alexander is a most excellent gentleman and the county will be fortunate in having his services.

We regret that Dr. J. B. Pittman, Crenshaw, is in poor health and unable to attend to his practice.

G. H. Wood.

#### TALLAHATCHIE COUNTY

Hope my notes will not reach you too late. Have been sick and just out. I had my first malarial chill on July 4 and I have been a real sick boy or at least I thought so.

Dr. and Mrs. J. E. Powell spent Wednesday in Memphis visiting their daughter. Dr. Powell reports having an accident while going to Memphis which came near being serious but fortunately his car did not turn over as he headed down an eight foot hill to keep from running into a road machine which was obliterated from his view from dust of another passing car.

Miss Elizabeth Bardwell, daughter of Dr. D. G. Bardwell, Charleston, was married at her home Wednesday morning at 9 o'clock to Mr. F. M. O'Shea, Jr. The ceremony was performed by Rev. T. J. Lockart, formerly pastor of the Methodist Church, Charleston. The bride and groom departed immediately for points on the Gulf coast. They will return about July 17, to Charleston where they will reside. Both are of prominent families and very popular among the young folks.

Drs. Powell, Bardwell and myself attended a fish fry and barbecue at Paducah Wells club house this afternoon. Many prominent men of Memphis were present as the dinner was given principally to honor the Memphians who came in response to an invitation from the Junior Chamber of Commerce. Several prominent speakers were heard. Hon. J. H. Caldwell, Charleston, was master of ceremonies.

Unless the medical and surgical profession get a better deal than they have been getting I feel that we should call off. There is no reason for the doctors working for nothing, when all other people serving the relief works are getting the

full price. When I am allowed \$25.00 for a major operation, the beneficiary is told that I have no right to collect anything beyond that just because I happen to have a hospital. This is absurd and ridiculous. Supposed I owned no hospital, then where would the hospital owner come in since the relief office had paid all to the surgeon they are allowed to pay under the law?

We doctors must demand that we get a better deal than we have been getting heretofore.

The practice of medicine is not a business any longer where the physician can get and expect a living. He is compelled to resort to other things for a living. So many people look upon the physician as a public servant who is supposed to go day or night, buy cars, gas, oils, etc., and be paid as though he was a beggar though he has spent several years and thousands of dollars preparing to serve the public.

Some folks even get sore if you turn them down and bemean the physician when that same fellow owes every doctor in the community. Unless we organize and demand our just rights we shall continue to be the underdog and shall soon lose the respect of the people generally.

J. W. Moody.

#### WARREN COUNTY

Dr. Preston Herring of our city spent a short vacation in the early part of the month down at New Orleans, endeavoring to locate "old land marks." Preston in his ultra-scientific ruminations is collecting data, so we are advised, to disprove the universal or axomatic adage that "The murderer will return to the scene of his crime."

Dr. Hudson, Utica, was a visitor to our city on several occasions during the past month. Dr. Hudson had in one of our local hospitals some patients critically ill.

The many friends, lay and professional, of Dr. J. B. Benton, Valley Park, are grateful to hear he is somewhat improved. Dr. Benton has been sick in one of our local hospitals.

Someone has said, "The acts of today become the precedents of tomorrow," but who of us can follow the precedent set by Dr. W. H. Parsons and his charming wife, who, we are informed, early in the month of July, secretly slipped away on their annual vacation to view the "beautiful isles of the sea that smile on the brow of the waters" as they continue their delightful voyage to "Latin America" seeking recreation and entertainment in the life and doings of our South American neighbors.

The many friends of Dr. Sydney Johnston will be gratified to know that good reports of his regaining his former health and vivacity come to us since his return from Rochester, Minnesota.

After graduating in medicine at Tulane Univer-



sity in 1933 and spending two years as house physician at the Baptist Hospital in New Orleans, Louisiana, Dr. B. B. Martin, Jr., has returned to Vicksburg for the practice of his profession. He will be associated with his father at the Vicksburg Infirmary. Benson's many friends, lay and professional, expect of him many good things in his professional career.

Dr. William Purks, as announced in last month's news letter, was married to Miss Helen Kemper, of this city, June 22, 1935. After their honeymoon they have returned to Vicksburg to assume with highest hopes and pleasant expectations their duties for a new life. The good wishes of many friends they have, and ye editor personally opines that in the after years they may mutually know, "How much the wife and husband is dearer than the bride and groom."

Dr. I. C. Knox has vacated the city today, July 4, for a one-day golfing vacation at Brown's Wells. I C. may see many minute things of a medical nature, but ye editor predicts that he will see for the last time many golf balls he hits today.

Speaking of the fourth, the "glorious fourth," causes "ye editor" to be somewhat reminiscent, perhaps not to the extent of the sage historian of Amory, but with perhaps equal depths of feeling. Ten years ago today we left a five years' service that we had given to Louisiana, we bid good bye to Dr. Oscar Dowling, that prince of gentlemen, we said, "Auf Wiedersehn" to many other dear and beloved friends among the lay and among our confreres to go to Pine Bluff, Arkansas, to become health officer of that city and director of the County Health Unit, then after a nearly three years' pleasant stay and service in the "Wonder State" we were brought back to Vicksburg and to our Native State. So as we sit alone in our office today concluding our monthly news letter for you to read and forget, as we think of those days and friends of the bygone years we more forcefully realize that "Time's fatal wings do ever onward fly!" Yet we are glad to feel and say "See, Time has touched me gently in his race, and left no odious furrows in my face."

H. T. Ims.

#### WASHINGTON COUNTY

Dr. J. A. Beals, Greenville, completed post-graduate study at Memorial Hospital, New York City, and other hospitals in New York, Philadelphia, Pa., and Cleveland, Ohio, during the month of June putting his time in on the study of irradiation of cancer, he being the head of the department of deep roentgen ray therapy recently added to the Gamble Bros. & Montgomery Clinic.

Dr. J. A. Beals also attended the meeting of the American Medical Association in Atlantic City.

Dr. H. A. Gamble has returned to the city after a month's absence. While away Dr. Gamble attended the meeting of the American Medical Association in Atlantic City. He then spent a week in New York City visiting the larger hospitals there, and later visited in Philadelphia, Pa., and Ann Arbor, Mich.

Dr. and Mrs. O. H. Beck, Mrs. William Penn, and Mrs. Hubert Armstrong of Greenville report a most successful fishing trip to Lake Washington this past month.

Dr. and Mrs. D. C. Montgomery and three sons, Cameron, Jr., John Atterbury and Billy, were the guests of Mr. and Mrs. Devere Dierkes of Hot Springs, Ark., for several weeks.

Dr. and Mrs. A. J. Ware of John Henry Plantation near Glen Allen, were among the visitors to Greenville during June.

Mr. and Mrs. Charles Paulas and son Charles, Jr., from Westfield, N. J., and also Mrs. Watson Mix and Mrs. Mike Abel of Elizabeth, N. J., visited Dr. and Mrs. A. J. Ware at their beautiful home on Lake Washington.

Mr. and Mrs. I. B. Moore and three children of Memphis were the house guests of Dr. and Mrs. R. E. Wilson of Greenville for a week.

Dr. and Mrs. R. E. Wilson, Greenville, extended their cordial hospitality to a large number of friends when they received informally for their guests, Mr. and Mrs. I. B. Moore of Raines and Memphis, Tenn., on the beautiful lawn of their home on Washington Avenue. Mr. Moore, who is the brother of Mrs. Wilson, with his wife and children have made many friends during their visit in Greenville and have been the recipients of many social courtesies.

Dr. T. L. Dobson, Leland, has been a patient at the King's Daughters' Hospital in Greenville recently for several days. His many friends are delighted to know that he is able to be out and has made a complete recovery.

Mrs. T. L. Dobson, Leland, spent several days in Memphis, having been called there on account of the serious illness of her mother.

Dr. C. W. Patterson, Rosedale, was a recent visitor to Greenville.

Dr. J. W. Shackleford, county health officer, spent several days as camp physician in the Washington County Y. M. C. A. Camp twelve miles out of Hot Springs, Ark.

Dr. and Mrs. F. M. Acree, Greenville, had as their house guests recently Dr. Acree's brothers, Mr. Lester Acree of Dover, Tenn., and Mr. George Acree and his two sons, George, Jr., and Billy, of Memphis, Tenn.

Dr. J. F. Lukas, Greenville, attended the meeting of the American Medical Association in Atlantic City.



Dr. and Mrs. J. C. Peagues and family spent a delightful vacation in Atlanta, Ga. While there Dr. Peagues attended clinics at Emory University.

Dr. and Mrs. E. T. White, Greenville, enjoyed a visit with Mrs. White's brother at Decatur.

Dr. and Mrs. L. C. Davis and family, Greenville, enjoyed a visit to Greenwood where they visited Mrs. Davis' brother, Mr. Seth Wheatley and wife.

Mrs. Forsythe Wheatley, Jackson, was the house guest of her sister, Mrs. L. C. Davis, Greenville.

Dr. and Mrs. L. C. Davis and house guest, Mrs. Forsythe Wheatley, enjoyed a fishing trip to Lake Washington and report unbelievable success.

Dr. and Mrs. O. H. Beck, Greenville, have recently had as their house guest Mrs. Beck's brother, Mr. Chas. Barrier of Jackson. Mr. Barrier has just returned from the Canal Zone where he has been for the last six years. He has been connected with the U. S. Engineers Corps.

Dr. E. W. Eubanks, Greenville, attended the National Guard Camp at Fort Knox, Ky. During Captain Eubanks' absence Mrs. Eubanks and Miss Eubanks visited friends and relatives in Helena, Ark., and Columbus.

Dr. and Mrs. J. B. Hirsch and family, Green, had a most delightful visit with relatives in Brownsville, Texas.

Dr. M. E. Lapham is giving his postgraduate course in obstetrics in this section of the state. He is holding lectures every Wednesday night at the King's Daughters' Hospital in Greenville. The attendance has been good and the course thoroughly enjoyed by all.

Miss Dorothy Thompson, the charming daughter of Dr. and Mrs. C. P. Thompson, Greenville, and her fiancé, Mr. Billy Keady, were honor guests at a dinner given by Mrs. T. B. Lewis. The happy couple were each presented with a beautiful piece of pottery as a token of affection on this occasion. Dr. and Mrs. Lewis' guests were Dr. and Mrs. C. P. Thompson, Miss Dorothy Thompson, Mr. Billy Keady, Miss Marion Swittenberg, and Mr. Lamb Crouch.

Mrs. Paul Gamble, chairman of the Washington County Park Commission, spoke at the weekly meeting of the Kiwanis Club in Greenville.

John G. Archer.

#### WINSTON COUNTY

Dr. E. L. Richardson has cleared away his old residence and is arranging to erect a handsome brick building.

Dr. W. W. Parks enjoyed a fishing trip to the Delta recently.

Dr. T. C. Suttle of Beth Eden neighborhood was in the city on business last week.

Dr. W. B. Hickman conveyed a patient to New Orleans last week.

Dr. W. W. Parks took a patient to a Meridian hospital for treatment a few days ago.

We congratulate Dr. H. B. Watkins, Noxapater, on his recent appointment as health officer for Winston County.

We note with interest that Dr. C. A. Kirk, Mashulaville, is out again from a short illness.

Dr. L. T. Parks who has been ill is improving and able to be in the city again.

M. L. Montgomery.

#### THE WOMAN'S AUXILIARY TO THE MISSISSIPPI STATE MEDICAL ASSOCIATION

President—Mrs. Leon S. Lippincott, Vicksburg

President-Elect—Mrs. Adna G. Wilde, Jackson

Secretary—Mrs. H. C. Ricks, Jackson

Treasurer—Mrs. J. W. D. Dicks, Natchez

Press & Publicity—Mrs. Hugh H. Johnston, Vicksburg.

#### THE WOMAN'S AUXILIARY to the HARRISON-STONE-HANCOCK COUNTIES MEDICAL SOCIETY

Mrs. Laura Lorene Bagley Brown Gay, wife of Dr. Elmer D. Gay, of West Beach, Long Beach, died Friday evening, July 5. She had been critically ill since Monday, July 1. She was born April 5, 1905, in Wyoming. She has lived at Long Beach since her marriage to Dr. Gay, September 28, 1931. The deceased attended the University of Wyoming and graduated from the Nurses Training School, LDS Hospital in Salt Lake City, Utah, in 1931.

Mrs. Gay was serving this year as president of the Woman's Auxiliary to the Harrison-Stone-Hancock Counties Medical Society.

She is survived by her husband; one son, Kenneth H. Brown, Jr., eight, son by a former marriage; her mother, Mrs. Laura Bagley; one sister, Mrs. June Graff of Lynwood, California; and one brother, John Bagley, of Granger, Wyoming.

#### VICKSBURG NOTES

Dr. and Mrs. Preston Herring and daughter, Helena, have returned from a vacation spent in New Orleans.

Dr. and Mrs. Benson Martin, Jr., are now making their home in Vicksburg much to the delight of their many friends. Dr. and Mrs. Martin spent a year in New Orleans at the Baptist Hospital.

Dr. and Mrs. Edley Jones enjoyed a vacation in Mexico City attending the International Rotary Convention.

Dr. and Mrs. Willard Parsons have returned from a Caribbean cruise.

Dr. and Mrs. George Street and daughters, Polly and Lois, have returned from a most pleasant trip to Atlantic City and New York.

Dr. and Mrs. Richard Street, Jr., are spending a week on the coast.

Mrs. Leon Lippincott and Stanley have returned from a trip to New Orleans.

Mrs. Laurance Clark and two children have returned from a month's visit spent in Clinton.

Mrs. Ewing Howard is visiting her daughter in Chicago.

Mrs. Mace Bell motored to Ohio to visit her son.

Dr. and Mrs. I. C. Knox spent several days at Brown's Wells.

Mrs. F. M. Smith entertained at a lovely bridge party for her house guest, Mrs. John Williams of Jackson.

Mrs. Hugh Johnston had as her house guest, Mrs. John L. Schinnick, of Austin, Minnesota.

#### THE WOMAN'S AUXILIARY

to the

#### ISSAQUENA-SHARKEY-WARREN COUNTIES MEDICAL SOCIETY

Mrs. George Street Relates Exciting Trip To Atlantic City

We arrived in Atlantic City the afternoon of June 9. Found the weather cloudy and cool. The next day all rainfall records were broken and I think the weather bureau had been in existence since 1874. In spite of the weather, the numerous members of the Canadian Medical and American Medical Associations registered, and am sure a great number visited the exhibits in the wonderful Convention Hall, as we did.

Monday evening, a reception and musicale, honoring the wives of the Canadian Medical Society, was held in the beautiful Palm Court Room at the Ritz Carlton Hotel. Distinguished artists, Wilbur Evans, baritone; Morris Braun, violinist, Joseph Vetere, cellist; and Clarence Fuhrman, pianist, presented a lovely program.

9 A. M. Tuesday, the general meeting of the Woman's Auxiliary to the American Medical Association was held in the beautiful dome shaped Library Room at the Traymore Hotel. After a splendid address of welcome by Mrs. James Hunter, of New Jersey, and a response by Mrs. William Hibbetts, that made me proud of our Southern delegates, there was the roll call of State Auxiliaries.

In the afternoon many of the ladies took advantage of a sail boat ride. The water was unusually rough, but that only made the ride a bit more exciting. The Atlantic City sky line is most attractive, seen from the ocean.

The sail boat ride ended just in time for a musicale and tea at the Traymore. That evening

the open general meeting was held at the Municipal Auditorium.

At the general Auxiliary meeting Wednesday morning, state reports were read, time limit three minutes each.

The evening was spent on Steel Pier. Among other forms of amusement was an informal dance in the gorgeous ball room over the ocean.

Thursday morning there were group discussions at the meeting. Luncheon at the Ritz-Carlton Hotel, followed by a style show, presented under auspices of the Woman's Auxiliary to the Atlantic City Medical Society.

That evening after a "Bring Your Husband Dinner" the president's reception and ball was held in the Renaissance Room, Ambassador Hotel.

The last day of the meeting the ladies could either play in a golf tournament or take a sight-seeing trip of Atlantic County.

After the first two days of the Association meeting the weather was gorgeous and many guests took advantage of the surf bathing.

Mrs. George M. Street.

#### COUNCILORS REPORT

##### SEVENTH DISTRICT—Mrs. L. L. Polk.

There is one active Auxiliary in this district, the Woman's Auxiliary to the South Mississippi Medical Society, with Mrs. S. E. Bethea, president, and Mrs. Grady Cook, secretary.

This Auxiliary attempted two main phases of work the past year:

1. A committee appointed to place Hygeia in our grammar, junior and senior schools. All three subscribed.

2. Financial and moral support of the Preventorium. Five dollars was donated and we are making plans for a silver tea to be given this fall, proceeds to go to the Preventorium. We also sponsor an essay contest in the Junior High School each year, the subject being, "Tuberculosis and the Preventorium," the prize being \$2.50. This contest was held in Hattiesburg last year, and rotates each year to towns represented in the Auxiliary district. It was held in Lumberton this year.

We have a Social Service Committee to co-operate with the two local hospitals in providing layettes to the charity wards.

#### REPORT OF STATE HYGEIA CHAIRMAN

I mailed Hygeia literature to each Auxiliary chairman and urged their presenting it to the schools and others whom they thought interested. My response has not been good. However, we have gained 28 subscriptions for the year.

I have presented programs from Hygeia six

times during the year in this county, talked to Girl Reserves using material in Hygeia. I have no expense account, only postage, and am glad to make that small donation.

Mrs. E. C. Mullins.

#### REPORT OF STATE CHAIRMAN OF PUBLIC HEALTH

I have written to the councilors and the president of the Auxiliary to the Delta Medical Society, urging them to sponsor the Preventorium essay contest and telling them of the material available should they wish to use it in their district.

Other phases of public health work that I have helped with are as follows: selling tuberculosis seals in my district, working with the Red Cross in the membership drive, and as a case worker.

Mrs. T. J. Barkley.

#### REPORT OF STATE PROGRAM CHAIRMAN

As chairman of the Program Committee, I beg to state that during the year, programs have been sent out to all of the Auxiliaries in the state. Contact has also been made with the different Auxiliaries for the purpose of stimulating interest

in the Preventorium, and to increase the membership in the different Auxiliaries. Progress has been made all along the line, for the little work that I have done has shown good results.

Mrs. Lucian S. Gaudet.

#### HONOR ROLL

The following have contributed to the Mississippi Section of the Journal this month:

COUNTY EDITORS: Lucien S. Gaudet; W. C. Walker, N. C. Knight, J. C. McGuire, L. L. Minor, W. B. Dickins, G. S. Bryan, G. H. Wood, J. W. Moody, H. T. Ims, John G. Archer, M. L. Montgomery.—12.

COUNTY SOCIETIES: W. K. Stowers, N. C. Knight, L. S. Lippincott, W. C. Walker, A. H. Little, J. W. Moody.—6.

WOMAN'S AUXILIARY: Mrs. Hugh H. Johnston, Mrs. D. J. Williams, Mrs. G. M. Street, Mrs. Leon S. Lippincott.—4.

HOSPITAL STAFFS: Clarksdale Hospital, N. C. Knight, Julius L. Levy, Natchez Sanatorium, W. K. Stowers; Vicksburg Sanitarium.—4.

OTHERS: J. R. Hill, J. R. Williams, Felix J. Underwood.—3.

TOTAL—29.

YOUR EDITORS THANK YOU.

## BOOK REVIEWS

*Mother Marianne of Molokai*: By L. V. Jacks. pp. IIXVI. 1-203. Illustrated. The Macmillan Company. New York, 1935. pp. 203. Price \$2.00.

To those who are interested in reading of a beautiful life devoted to the alleviation of suffering under the most trying and horrible conditions, and to those who are interested in leprosy, this book will prove of value, as it pictures in true colors the development of the leper colony of the Hawaiian Islands upon Molokai and the self-sacrificing work of the Sisters of Saint Francis, headed by Mother Marianne, who, from 1888 until the present time have labored among the lepers on this island. To the reviewer, who has visited Molokai and had the honor of meeting Mother Marianne, the book revives memories which have always been the most poignant of his life, for to one who has observed this leper colony and has studied the unfortunates who are its inhabitants, impressions remain which can never be effaced; impressions of the cheerful submission to a terrible misfortune by the victims of the diseases and of consecrated service by the doctors, Sisters and helpers who have chosen to care for these unfortunates.

The book is well written and every page is interesting and will well repay perusal. The entire history of the Molokai leper colony is covered and

the pathetic story of Father Damien is well told. It is interesting to know that despite the close contact with the lepers that is entailed in their work among them, there has never been an infection with this disease among the Sisters since they first came to Hawaii, in 1884, to devote their lives to these unfortunates.

CHAS. F. CRAIG, M. D.

*Human Sterility*: Causation, Diagnosis and Treatment; A Practical Manual of Clinical Procedure. By S. R. Meaker, M. D. Baltimore. The Williams and Wilkins Co., 1934. pp. 276. Price \$4.00.

Involuntary sterility is one of the major problems confronting the gynecologist and obstetrician today. In this excellent volume the authors with brevity, clarity and remarkable organization, presents the subject in a manner that enables one to grasp easily, the problems encountered, the diagnostic procedures to be followed and therapeutic measures that may be utilized in cases of involuntary sterility.

The book is divided into three parts. In part one the causation of human infertility is discussed, with proper emphasis upon the male factor. Part two is devoted to the diagnostic study of sterile mating with careful consideration of gynecological.

urological, constitutional, endocrine and psychic factors. The treatment of sterility is discussed in the third part.

This concise, comprehensive volume, is heartily recommended to any physician interested in the subject of sterility.

CONRAD G. COLLINS, M. D.

*Epidemics and Crowd-Diseases:* By Major Greenwood, D. Sc., F. R. C. P., F. R. S. New York. The Macmillan Company, 1935. pp. 409. Price \$5.50.

An outstanding book is this one on the general principles of epidemiology. The author teaches vital statistics as well as epidemiology in the London School of Hygiene and Tropical Medicine, consequently certain problems are subjected to very critical statistical analysis.

The first part of the book deals with the general principles and methods of epidemiology. Its development is traced from the time of Hippocrates to the present day. A chapter is devoted to experimental epidemiology which is mainly a review of the work which controlled epidemics among mice carried on in England.

The chapter on artificial immunization of man merits careful reading by everyone interested in the prophylaxis of disease by active immunization. That part which is devoted to a discussion of typhoid vaccination is particularly recommended. As has been pointed out previously, the author cautions against the assumption that typhoid vaccination in a civil population will necessarily be as effective as in the military camp. A significant statement is made with reference to epidemic diseases, which is frequently ignored, that there is doubt whether "any method of immunizing could, single handed, protect a crowd against the continuance of crowd sickness."

The second part of the book takes up a discussion of certain epidemiological problems encountered in specific epidemic and other crowd diseases. It will be impossible to review each chapter in detail. The discussions on typhoid fever, tuberculosis and influenza are the most outstanding.

This book should be carefully studied, not merely read, by everyone interested in epidemiology and control of communicable disease. It is not a manual or guide for the control of epidemic diseases.

C. C. DAUER, M. D.

*Clinical Management of Syphilis:* By Alvin Russell Harnes, M. D. New York. The Macmillan Co., 1935. pp. 71.

This is a handbook or compend.

In the first chapter, the author shows very definitely the inadequacy of diagnostic measures and methods of treatment demonstrated in a survey of 52 clinics in New York, City.

I do not believe the majority of the syphilologists will agree with the type of intensive treatment the author suggests, salvarsan or neo-salvarsan with mercury and bismuth during the same week over an extended period of time.

MONROE WOLF, M. D.

*Carlos J. Finlay:* By Professor Francisco Dominguez. Paris. Illustrated. Louis Arnett, 1935. pp. 302.

This entertaining and interesting volume by Professor Dominguez is devoted to a history of the part played by Dr. Finlay in the discovery of the role of the mosquito in the transmission of yellow fever. It gives a very detailed account of Dr. Finlay's experiments and his relations with the American Commission for the Study of Yellow Fever and contains, in addition, reproductions of numerous documents relating to this subject and a bibliography of the works of Dr. Finlay. To those who are interested in history of the important discovery of the relationship of mosquitoes to yellow fever this work will be of interest and value. The monograph is in Spanish and would well repay an English translation.

CHAS. F. CRAIG, M. D.

*Ideal Health:* By Alexander Bryce, M. D. Baltimore. William Wood & Co., 1935. pp. 340. Price \$2.00.

A small book, in its third edition, devoted to the "laws of life and health," which deals with food, drink, work, rest, cleanliness and clothing. Eugenics is discussed and the road to happy living is mapped out for one who would travel and avoid the pitfalls of this life. It is filled with statements that are rather poorly proved, to say the least, but it makes rather interesting reading in spare moments.

I. I. ROBBINS, M. D.

*Methods of Treatment:* By Logan Clendenning, M. D. St. Louis. C. V. Mosby Co., 1935. pp. 879. Price \$10.00.

This is the fifth edition of a book that occupies an important niche in therapeutics. It is written in a lucid, simple and charming style characteristic of Clendenning. Delightful excursions into the realms of history and anecdote and personal experience enhance its charm and value. Highly specialized procedures as medical massage and electrotherapy etc., are the work of collaborators, specialists in their fields. The book is divided into two major divisions. The first deals, in a general way, with the agents and methods used in therapeutics. The second deals with the application of agents and methods of particular diseases. Many criticisms concerning the merits of inclusion and



exclusion of material could be leveled at the book but they would not prove of any great constructive value. The author's policy has been to incorporate new but not novel methods of treatment and to refrain from the use of little tested and less proved therapeutic agents. It is of inestimable value to those engaged in general practice.

I. I. ROBBINS, M. D.

*International Clinics* v. 1, March 1935. Philadelphia. J. B. Lippincott Co., 1935. pp. 310.

It is becoming trite for the reviewer to laud the excellence of this quarterly but the continued superior quality of articles of paramount importance in the fields of medicine and surgery and the allied specialties by individuals of prominence in the medical profession compels the laudation of the reviewer. Articles concerning ketosis and ketogenic diet, insomnia, syphilis of the stomach, the management of the so-called blood diseases, post-operative pulmonary embolism are but a few of the highly important matters dealt with in this issue.

I. I. ROBBINS, M. D.

*Names of Surgical Operations*: Compiled and arranged by the Western Surgical Association through its Special Committee. Edited by Carl E. Black, A. M., M. D. Bruce Publishing Company, St. Paul and Minnesota, 1935, pp. 102.

More than four years ago the Western Surgical Association took upon itself the task of revising the current surgical nomenclature, and appointed as a special committee to do the work Dr. E. Starr Jurr, Dr. Kellogg Speed, Dr. Harry P. Ritchie, and Dr. Carl E. Black, the latter of whom served as editor. The necessity for such a revision is a point that need not be labored. As the preface mentions, Dorland's *Medical Dictionary* contains three thousand, three hundred and thirteen names of operations, some six hundred and forty-five of which are eponymic. Such a multiplicity of terms, far from implying a corresponding richness of thought, actually implied a lack of thought. It led to nothing but confusion, as every physician and surgeon knows and as medical literature, hospital records, and casual medical conversation alike prove.

The Committee began its work by sending to each member of the Western Surgical Association the names of the operations listed in Dorland's *Dictionary*, with the request that he check the terms he himself used. All terms which did not receive the approval of at least twenty per cent of the membership were eliminated at once. Then, after still further checking and correcting and eliminating, the final list was made according to the following rules: that each operation should have only one name; that each name should be in

English or a foreign language equivalent, and should be, within reasonable limits, philologically correct; that each name should be as simple and as short as possible; that all the terms should be merely memory signs and without claim to description or speculative interpretation; that related terms should be similar as far as possible; and that personal names should be avoided. On the basis of these rules the original list of three thousand, three hundred and thirteen names was reduced to seven hundred and forty-three, a reduction of some seventy-five per cent.

The important consideration, of course, is that this reduction represents not the personal whims and arbitrary ideas of a small committee, but the collected opinion of hundreds of surgeons and other authorities from whom the committee sought aid and advice. Another consideration which should also be emphasized is the wisdom of the Committee in retaining certain terms in general use, incorrect though they be for one reason or another, simply because they are in general use and because usage, right or wrong, is, after all, the basis of all speech.

Many points of disagreement are naturally evident as one glances through the book. The gynecologist, for instance, will miss the term for supravaginal or supracervical removal of the uterus, though he will rejoice to see that removal of the uterus and removal of the adnexa, in whole or in part, even when done at the same time are separately designated. But it would be folly to expect perfection, even in so carefully planned and executed a book, and ungracious to pick flaws when so much is entirely satisfactory.

It would profit all surgeons, and all students of medicine, to secure this book and to study it carefully. It is an interesting and valuable piece of work, and the principles upon which it is based could well be put into practice. Especially to be commended to the reader is the preface in which the Committee sets forth these principles and in which its method of procedure is described.

URBAN MAES, M. D.

*The Management of Fractures, Dislocations, and Sprains*: By John Albert Key, B. S., M. D. and H. Earle Conwell, M. D., F. A. C. S. St. Louis. C. V. Mosby Company, 1934.

This work on the diagnosis and treatment of fractures, dislocations, and sprains by Key and Conwell justifies the expectations of surgeons of any work produced by these two authorities on the osseous system. The work is exceptionally complete, covering every type of fracture, including the complications, with an adequate description of the clinical manifestations and treatment. The book is profusely illustrated, there being 1165 illustrations. In addition to the chapters written

by Key and Conwell, there is a chapter on fractures of the skull by the late Charles E. Dowman and a chapter on fractures of the jaw and face by J. B. Brown. A valuable part of the book is that at the beginning of each chapter the surgical anatomy of the bowel region is given in detail and from this the abnormal conditions produced by fracture are illustrated. The book is well written and easy to read. It is the reviewer's opinion that every practitioner of medicine who treats fractures should have this book in his library.

ALTON OCHSNER, M. D.

*The Clinical Aspects of Visceral Neurology.* With especial reference to the Surgery of the Sympathetic Nervous System. W. K. Livingston, M. D. Springfield, Illinois. Charles C. Thomas, 1935. pp. 254, illus. Cloth. \$5.00.

The volume before me for review reveals the efforts and painstaking research of the author. The material contained therein is the result of intense and intelligent effort in order to advance and stimulate interest along the lines of visceral surgery of the sympathetic nervous system. This the Doctor has accomplished by the subject matter obtained following his personal contact and observation on 300 cases with a most systematized follow up survey of his results.

Divided into three parts and fifteen chapters, this monograph is well written and styled, in a manner suitable to the present trend of progressive thought.

The contents display serious effort in the field of neurosurgery of the sympathetic and prove the value of this type of treatment, in Raynaud's disease, angina pectoris, erythromelalgia, scleroderma, and pelvic disorders. The diagnostic methods are very well covered. An excellent bibliography is to be found at the end of the chapters which will be of interest to those following this topic.

WALTER JOSEPH OTIS, M. D.

*Surgical Diseases of the Chest:* By Evarts A. Graham, A. B., M. D., F. A. C. S.; Jacob J. Singer, M. D., F. A. C. P., and Harry C. Ballou, M. D., C. M., F. A. C. S. Philadelphia. Lea and Febiger, 1935. pp. 1070.

"Surgical Diseases of the Chest" by Graham and his associates is by far the most complete single volume work on the subject which has ever been

published and is certainly the most complete work on this subject in the English language. No persons are better equipped to write this book than are the authors, and their efforts are certainly justified. The general consideration of the subjects is valuable for anyone interested in diseases of the chest and the book's usefulness is not limited to surgeons, because the medical considerations of various thoracic conditions are also well handled. Of special value to the investigator is the extensive bibliography which follows each chapter and which is very complete. The chapters on bronchiectasis and pulmonary tuberculosis are especially well done. The book is recommended for all interested in diseases of the thorax whether they be surgeons or internists.

ALTON OCHSNER, M. D.

#### PUBLICATIONS RECEIVED

Paul B. Hoeber, Inc., New York: *The Story of Medicine in the Middle Ages*, by David Riesman, M. D., Sc. D.

*Journal of the Outdoor Life*, New York: 1,000 Questions and Answers on T. B.

Williams & Wilkins Company, Baltimore: *The Spleen and Resistance*, by David Perla, M. D. and Jessie Marmorston, M. D., with foreword by David Marine, M. D. *Medical Annual* (1935), edited by H. Letheby Tidy, M.A., M.D., Oxon., F.R.C.P. and A. Rendle Short, M.D., B.S., B.Sc., F.R.C.S.

Lea & Febiger, Philadelphia: *Arthritis and Rheumatoid Conditions*, by Ralph Pemberton, M.S., M.D., F. A. C. P.

D. Appleton-Century Company, Inc., New York and London: *The Principles and Practice of Medicine by The Late Sir William Osler, BT., M.D., F.R.S.* Twelfth Edition; Revision by Thomas McCrae, M.D.

W. B. Saunders Company, Philadelphia and London: *A Textbook of Clinical Neurology*, by Israel S. Wechsler, M.D.

The Macmillan Company, New York: *The Autonomic Nervous System*, by James C. White, M.D.

Charles C. Thomas, Springfield, Ill. and Baltimore Md.; *Child Psychiatry*, by Leo Kanner, M.D. with prefaces by Adolf Meyer, M.D., LL.D. and Edwards A. Park, M.D. *Apparatus and Technique for Roentgenography of the Chest*, by Charles Weyl and S. Reid Warren, Jr.

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NEW ORLEANS, LA.

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## TRIBUTE TO DR. JOSEPH GOLDBERGER\*

W. A. DEARMAN, M. D.  
GULFPORT, MISS.

Many advances have been made in the public health domain in the past few years. Many disease which have heretofore been obscure have been brought out into the open and divested of their cloak of mystery, and more is known in reference to their causation and prevention. After the cause of a disease has been found, the preventive measures are easily carried out under the supervision of the Public Health Service, with the cooperation of the profession as a whole—either to eradicate the disease, diminish its severity, or prevent its spread. In knowing more about these diseases, which are too numerous to mention, and with the safeguards that are thrown about the public in general, with the cooperation of the profession at large, the span of human life has been prolonged approximately fifteen years.

Many illustrious men and women have contributed, through their untiring energy and research activities, to our knowledge of certain diseases that often appear in epidemic form, and sometimes are world-wide in their distribution. Many research workers have lost their lives in experimenting with diseases of known and unknown causes. While there have been many outstanding scientific research workers throughout the country who have contributed in a large measure in bringing us to a better under-

standing of the causes and prevention of diseases, there was none who was more illustrious, outstanding, and beloved than Dr. Joseph Goldberger. He was known by every physician in this country and abroad, and throughout the entire world. Dr. Goldberger was born in 1874 on a peasant tenant farm in Hungary (now Czecho-Slovakia). He came to this country with his family when he was seven years old, and they settled in New York. He and his brothers attended the East Side Public School, and his father had a grocery store that catered to all creeds and races of the Pitt street neighborhood on the lower East Side. They did a thriving business, and Dr. Goldberger and his brothers were the delivery boys. Dr. Goldberger however was slow on deliveries; he had a book under his coat, and spent much time in reading. At sixteen he entered a course of civil engineering at New York City College. The career of a civil engineer would provide travel, adventure, and mathematics, his favorite subject in school. In school he progressed with ease and distinction, standing fifth in a class of six hundred at the end of the second year. The impressionable boy of eighteen chanced to attend the Harvey lecture, given in 1892 by Austin Flint, Jr. (then at the Bellevue Hospital Medical College). He gave up the engineering business, immediately transferred his interest to medicine, and entered the Bellevue Hospital Medical College. In 1895 he graduated number two in his class and stood number one in the examinations for internship appointment at Bellevue. At the medical school he was known chiefly as a "hater" of routine, and was a master of case history writing. To

\*Read before the Mississippi State Medical Association, Biloxi, May 15, 1935.



him every case was a problem, a mystery that must be solved. His case histories were models of perfection, and were held up as such by the visiting staff members for the other interns. His case histories further reflected their author's grasp of the clinical problems, and his ability to present in a few plain words the essential data that pointed out the road to the diagnosis.

He engaged in private practice for two years after graduation, but at the end of that time he soon found that private practice was not his field. His friends have styled him as "the adventurous Goldberger."

During the first fifteen years that followed his term at Bellevue, he was profoundly influenced, often inspired by a series of men with whom he became associated.

At the beginning of the Spanish American War, he tried to enter the Navy Medical Corps, but his application was ignored. In 1899 he entered the Public Health Service, and his first station was at Reedy Island, Delaware River.

He became interested in yellow fever. He was thrilled by the Reed experiments in Cuba, and more thrilled by the previous observations of Henry Carter, who directed the early course of the experiments of the Reed group. In 1902 he went to Washington and pleaded with Walter Wyman, then Surgeon General, for a station in Tampa so that he could study yellow fever. He was given the assignment.

For five years he was engrossed in the study of yellow fever and was happy beyond his wildest boyish expectations. He attained a masterly knowledge of mosquito life, contracted yellow fever, and almost died of the disease in Mexico. He introduced new and lasting ideas in yellow fever quarantine. He exploded several false discoveries which were then being announced regarding the yellow fever organism, and became one of the world's authorities on yellow fever. When the 1905 epidemic in New Orleans ended the story of yellow fever in the United States, he dropped the subject, took up parasitology,

and spent five years in Stiles' Department at the Hygienic Laboratory.

In 1914 his great pellagra adventure began, and he did extensive studies and experimentation in Mississippi, our own state. It will be recalled that in 1915 Dr. Goldberger and his assistant, George A. Wheeler, of the United States Public Health Service, made an experiment attempting to produce pellagra in healthy men. After satisfactory arrangements had been made with the officials of the Mississippi State Board of Health and with Gov. Earl Brewer, and with the assurance of full support and cooperation, Dr. Goldberger and his assistants began making plans for the experiment. This experiment was carried out at the farm of the Mississippi State Penitentiary, a few miles east of Jackson. On an isolated spot at this farm of thirty-two hundred acres, there was a prison camp, with cottages for officials, the hospital, and a few other buildings. It may be of interest to relate briefly some of the details of the experiment. During the period of the experiment there were quartered in this camp an average of between seventy to eighty convicts, all white males. In this number there were twelve who accepted an offer of pardon, made them by Gov. Earl Brewer, and with the assurance of proper care and treatment, should such be needed, volunteered to submit themselves to the experiment. There had never been a case of pellagra on the farm.

The twelve men were quartered in what was called the new hospital building, a small screened, one-story cottage, about five hundred feet from the "cage" in which the other convicts were domiciled. From the time of its organization, the squad was strictly segregated and under guard day and night. From February 4 to April 19, 1915, these men were kept under observation without any change in diet. Having detected no evidence of pellagra during this preliminary period, and after having established the desired routine of work and discipline, the diet was changed at noon April 19, 1915. On

July 1, 1915, one of the men was discharged from the squad on account of an acute illness which necessitated treatment. This left eleven, to complete the test, with ages ranging from twenty-four to fifty years, who remained on the prescribed diet until October 31, 1915. The diet consisted of biscuits, corn bread, grits, rice, fried mush, brown gravy, sweet potatoes, cabbage, collards, and cane syrup; the sugar was white granulated; the syrup, home-made cane syrup. No vegetable fats entered into the diet. The corn meal and grits were of the best quality obtainable in the local markets. The weekly work performed by these men was as follows: white-washing fences and buildings, two and one-half days; sawing lumber, two days; and resting, two and one-half days. The entire population of the camp was kept under observation, and served as controls. The work done by the volunteers was about the same as that done by the other convicts; such differences as existed were in favor of the volunteers. The general sanitary environment was the same for volunteers and controls, but the hygienic environment was somewhat in favor of the volunteers.

Of the eleven men on the above outlined diet, not less than six developed symptoms, especially skin manifestations, justifying a diagnosis of pellagra. The nervous and gastro-intestinal symptoms were mild, but distinct. The first signs of pellagra were noted between September 12 and 24, 1915, or not later than five months after the beginning of the restricted diet. A diagnosis of pellagra was concurred in by Dr. E. H. Galloway, secretary of the Mississippi State Board of Health at that time, Dr. Nolan Stewart, formerly superintendent of the Mississippi State Hospital for the Insane at Jackson, and two prominent professors of skin diseases, one from the University of Tennessee, and the other of Washington University Medical School in St. Louis.

Dr. Goldberger received the fullest cooperation in his experiments, and Mrs. Gold-

berger was enthusiastic over his work. She is deeply appreciative of the fact that Mississippi was the only state that gave her husband full support in his experiments in an attempt to discover the cause of pellagra. During the course of his experiments, in order to disprove the infectious or contagious theory about pellagra, Dr. Goldberger, his assistants, and Mrs. Goldberger submitted themselves to experimentation. Dr. Goldberger slept in beds, in dirty hovels, where pellagra victims had died. Dr. Goldberger was so sure that pellagra was not contagious or infectious he injected the blood from a person dying of an active case of pellagra under the skin of Mrs. Goldberger, without any ill effects.

Dr. Goldberger died a few years ago after this nation had heaped honors upon him. In his passing, the nation lost one of its most valuable research workers. Mrs. Goldberger has in her possession, I understand, priceless daily letters he wrote her when he was away in other states and foreign countries conducting research work, in which he stated the minute details of his experiments.

She is as keenly interested in medical research today as she was when she cheerfully let her husband leave home on research work when she herself was ill. She has medical theories of her own, and she firmly believes that black tongue in dogs is pellagra in dogs. Mrs. Goldberger has often visited the State Board of Health offices at Jackson, and has always received a most cordial welcome.

At the April meeting of our local medical society, a resolution was unanimously adopted that the profession of Mississippi pay the highest tribute to the work and memory of Dr. Joseph Goldberger, and that Mrs. Goldberger be requested to honor us with her presence on this occasion. Mrs. Goldberger is now residing in Biloxi, and has kindly consented to be present here this evening. It now becomes my privilege and pleasure to present to you Mrs. Goldberger.

# THE CLASSIFICATION AND TREATMENT OF NEVI\*

JAMES K. HOWLES, M. D.†  
NEW ORLEANS

The term "birthmark" is a rather inclusive one which is used indiscriminately in lay conversation to describe a great variety of tumor formations of uncertain cause. The medical profession is beginning to discard the term "birthmark" and are classifying these malformations as nevi. Even the term "nevus" is too inclusive to apply to such a large group of skin lesions as nevi for often a qualifying term is necessary for descriptive purposes. Nevi exist at birth but do not necessarily become visible at that time. The embryonal rests are supposedly present in the newborn, but may not make their appearance until late in infancy or childhood. There is a definite need for a simple classification of this complex group of malformations that will enable one to visualize just what type of nevus is being considered, by the mere mention of a few descriptive terms. The proper derivation of the word nevus is no doubt from the Latin word "neavus", meaning a blemish or mark. The presence of nevi on nearly every ones skin makes the classification and treatment of these moles a study that should be of interest to all branches of the profession.

The writing of this paper is undertaken with a thorough realization of the need for a more standardized method of treating these nevi. There is certainly an enormous amount of misinformation, concerning these potential malignant growths of the skin, and these untruths are innocently being disseminated among those who are called upon to treat them. It is really surprising how little is known of these superficial tumor growths, which are so easily accessible. This paper will be somewhat of a resume of these so-called "birthmarks," and in it an effort shall be made to correlate the therapeutic experiences of others, as well as to

report on some 200 cases treated by the author.

This great difference of opinion that prevails regarding moles should not exist. To appreciate the diversity of opinion that really exists concerning these nevi, it is but necessary to scan over the popular text-books of surgery, pathology and dermatology and observe what a mass of unfamiliar terms are applied to the classification of these nevi. In an equally unsettled state is the histogenetic phase of these moles. There are a number of hypotheses and theories concerning the origin of nevi, but before mentioning anything of these theories, it is necessary to sub-divide the general group of nevi into two distinct groups, for the histogenesis of these two classes of nevi must be discussed separately. The two groups to be considered are designated as the vascular and non-vascular nevi. The scope of this paper will not permit a very lengthy discussion of the origin of nevi, but certainly a mere mention of the prevailing views of their etiology is not only pertinent, but necessary to better understand the classification, treatment and prognosis of moles.

The three popular theories of the origin or histogenesis of the benign melanomas or pigmented nevi are: first, that they are derived from mesodermic tissue and when malignancy complicates the picture these new growths should be classed as melanosarcoma. The second theory is the epithelial theory of Unna, which contends that nevi arise from protective epithelial tissues and any malignant changes which occur should be called melano-carcinomas. The third theory regarding the origin of pigmented nevi is championed by the followers of Soldon<sup>7</sup> who contend that these nevi are closely related to nervous tissues, and any malignant sequelae which develop should be grouped under the term neuronevus. Unna's<sup>2</sup> epithelial theory has long been the most popular of the group, but Soldon's theory of nervous origin was originally introduced by Recklenghansen, is fast gaining prominence, especially since the publication of Masson's<sup>3</sup> convincing work on the cutaneous sensory nerves.

The followers of Unna have many arguments in favor of the epithelial origin of nevi, and

\*Read before the Louisiana State Medical Society, New Orleans, April 29-May 1, 1935.

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they cite numerous examples of similarity in both form and function of the nevus cell and the normal epithelial cell.

Concerning the origin of vascular nevi the etiology is equally as vague as that of pigmented nevi. The popular conceptions of the pre-natal maternal impressions causing vascular nevi, is believed to have no significance. Pusey<sup>4</sup> and other writers believe these striking examples are due to coincidence and are not instances of cause and effect. The fetal cleft theory of Virchow<sup>5</sup> and the hyperextension and hyperflexion hypothesis of Pollitzer<sup>5</sup> are not generally accepted. It is surprising how little is known of these nevi, which render themselves so accessible for study. The literature abounds with paper propounding the various theories of all types of nevi, but our concern in this presentation is a clinical evaluation, and to that end we must strive.

#### HISTOLOGY

As to the histopathology of an ordinary pigmented nevus, the findings are fairly characteristic and uniform. According to Traub<sup>6</sup> pigmented nevi present two factors for consideration, the nevus cells and the alteration of normal pigment activity. McCarthy<sup>7</sup> urges a thorough study and understanding of the normal pigment functions of the skin before endeavoring to undertake the study of nevi. Although a benign pigmented nevus is easy to diagnose histologically, it is often exceedingly difficult to determine clinically or even histologically, whether a particular type of nevus has become malignant or what will be the prognosis, even after removal. A safe criterium upon which to judge clinically a pigmented lesion of the skin, whether of an acquired or a congenital type, is when a nevus has begun to grow and show change in color, ulceration, irregularity in shape or surface markings, a malignant change is probably taking place. Supplementing this clinical evidence with a histological study where the sections show an irregular downward growth with separation of the basal layer and perivascular and interstitial edema, a round cell infiltration and the formation in alveolar arrangement of pigmented nevus cells, which are irregular and swollen and the findings of some of these cells in the perivascular

and interstitial spaces of the cutis, we can assume the presence of a malignant change. Showing that the pathological picture of melanocarcinoma is variable, Cannon<sup>8</sup> quoting from Pierre Mason in "Tumors des Tissuo Pigmentaires" says that, in spite of wide distribution melanotic tumors have common characteristics, but they have not the same histology. Some resemble sarcomas, while others epitheliomas. Usually they present a complex structure, sarcomatous on one side and epitheliomatous on the other, there being no sharp division between the two." Ewing<sup>9</sup> and others have emphasized the apparently innocent histologic and clinical characters of certain moles, which have given rise to metastatic growths. The pathology of vascular nevi is much more simple and in brief the histologic examination reveals a tumor mass composed of dilated capillaries which anastomose with one another and are so dilated as to virtually form blood sinuses.

#### CLINICAL CLASSIFICATION

The clinical classification of these nevi has been the text of innumerable essayists for many years. A clinical differentiation is just as important to the practitioner, as a pathological classification, in determining what mode of therapy he should pursue. Traub<sup>6</sup> has formulated an excellent table of classification, but it appears to be too complete or inclusive for the average busy physician to adhere to. Clinically there are two distinct groups of nevi, first there is a definite vascular group due to hyperplasia of the blood or lymph vessels called the "vascular nevi" and another group called the "non-vascular nevi" in which the connective tissue or epidermal tissues predominate. Frequently these nevi change from one clinical type to another. The following tables are compiled from modifications of various classifications of nevi and may help to simplify the differentiation of the more common forms of nevi:

Table I

*Vascular nevi* (including both blood and lymphatic nevi)

##### I. *Flat vascular nevi*

- a. *nevus flammeus* ("port-wine" mark)
- b. *Telangiectasis*
  1. spider-like nevus  
(*nevus araneus*)



- c. Depigmented nevi
  - 1. nevus anemicus

## II. *Elevated vascular nevi*

- a. Nevus vasculosus (strawberry mark)
- b. Angioma (nevus sanguineus)
  - a. Angioma simplex (superficial)
    - 1. Capillary nevus
  - b. Angioma cavernosum (deep).

## III. *Lymphatic nevi*

- a. Lymphangioma simplex
- b. Lymphangioma cavernosum
- c. Hemolymphangioma.

*Flat vascular nevi* occur mostly on the face and neck. The "port wine" marks are very common in infants. *Nevi flammeus* are thought to be present in about one third of all newborn infants, but sometimes disappear spontaneously, and for that reason the "port-wine" stains are seen less frequently in adults than are the elevated forms of vascular nevi. Vascular nevi present themselves in a great variety of clinical formations on any part of the skin and often involve the mouth, tongue, lips and genitalia. These nevi range in size from that of a pin-head to an involvement of a considerable part of the body. They exhibit many variations in shape, color and surface appearance.

The telangiectasia are thought to follow prolonged exposure to sun and wind. There are several clinical varieties of these telangiectasia including papillary ectasis or varices and generalized telangiectasia, but time will permit a mere mention of these various manifestations. All nevi do not contain pigment, and to this group of white macules is given the name of *nevus anemicus*. These depigmented nevi are believed to be due to a lack of blood vessels in the area, they are the antithesis of vascular nevi. The elevated vascular nevi are commonly met with in adult life and may be superficial or deep. There are few subjective symptoms associated with them, unless growth or degeneration with concomitant sequelae complicate the picture. The lymph vessels are involved in much the same manner as the blood vessels, and their classification is necessary for therapeutic reasons, as their response to treatment is variable.

The pigmented moles are so common that they are looked on with derision by many laymen, and even the members of the medical profession seem to be at variance concerning the importance of these nevi. J. A. Fordyce, one of the pioneers of dermatology in this country is quoted by Lehman<sup>10</sup> as saying that the malignant tendency of pigmented moles is exaggerated. At least some of the pigmented nevi are potential epitheliomas, especially if mistreated or subjected to excessive trauma. It would seem that the burden of proof of the inoffensiveness of pigmented moles certainly rests on the shoulders of these who scoff at their malignant potentialities. Malignant melanoma is the most malignant of all tumors and the frequency of the pigmented moles, which in many cases are forerunners of these malignant melanomas, makes the entire subject of cutaneous melanomas of great clinical importance to all physicians.

The following classification of the more common pigmented varieties is far from complete, but will serve for practical clinical differentiation.

Table II.

### *The Common Non-Vascular Nevi*

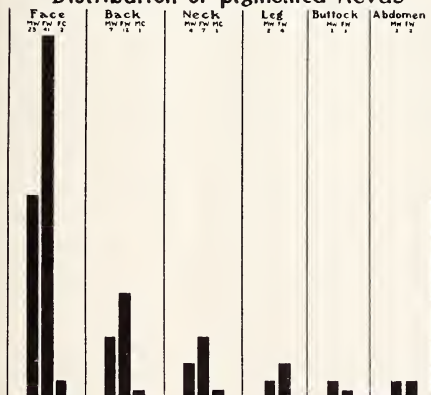
- I. *Nevus Spilus* (pigmentary macules)
- II. *Verrucous nevi* (*nevus verrucosus* or *hard warty nevi*)
  - a. *Hard verrucous nevi*
    - 1. *nevus verrucosus linearis*
    - 2. *hyperkeratotic nevi* (congenital warts).
  - b. *Soft verrucous nevi*
    - 1. *Nevus papillomatous*
    - 2. *Fibroma pendulum*
    - 3. *Hairy warty nevus*
- III. *Connective Tissue Nevi*
- IV. *Soft pigmentary nevi* (soft moles including hairy and non-hairy moles, *nevi pilosis* and *nevi sebaceous*).
  - A. *Hairy Nevi*
    - 1. *Small soft hairy nevi*
    - 2. *Giant nevi* (bathing trunk nevi)
  - B. *Hairless Nevi* (black, bluish black or brownish flat or rounded moles).

- C. Fatty nevi (lobulated nevi)
- D. Fleshy pedunculated nevi
- E. Mixed types
- F. Unusual varieties (blue nevi, depigmented nevi, etc.)

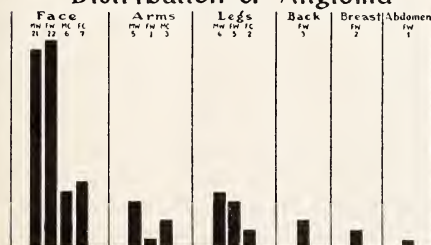
The scope of this paper will not permit a description of the clinical variations of non-vascular nevi. The names are supplemented to the pigmentary term to describe structural components, clinical appearance or distribution.

In this small series of cases which I am reporting, the malignant melanomas have been omitted, as that group is associated with such grave complications that it requires distinct consideration. The following tables will show the incidence and distribution of these nevi classed according to race and sex, age played no essential part in their incidence, but is of very definite importance in their treatment.

**Distribution of pigmented Nevus**



**Distribution of Angioma**



## DIAGNOSIS

The common forms of both vascular and non-vascular nevi are readily identified, clinically. The deep vascular or cavernous nevi occasionally require differentiation from benign or malignant sub-cutaneous tumors, as well as from ganglia or cysts. The superficial pigmented nevi at times resemble clinically seborrheic warts and small patches of senile keratosis, and even pigmented sebaceous cysts. The depigmented nevi are sometimes mistaken for vitiliginous patches of the skin. Subjective symptoms are rarely encountered, unless the nevus begins to grow rapidly and causes pressure phenomena. The importance in diagnosis is to classify the nevi properly for the therapy depends so much on their structure, which, of course, determines to a great extent their grouping.

## COMPLICATIONS

The complications should perhaps be discussed after therapeutic measures are outlined, for it is my firm belief that most of the serious complications that do occur in nevi can be attributed to mistreatment.

The complications of nevi should be considered from two angles, first, the complications which occur in the untreated nevi, and second, those complications that follow therapeutic intervention. The most common changes occurring in the untreated nevi are ulceration, malignant degeneration, and spontaneous disappearance.

Spontaneous ulceration occurs frequently in the cavernous hemangiomas. Hemorrhage often accompanies the ulceration due to erosion of blood vessels. The ulceration stimulates scar tissue formation and may promote cure, but the scarring is usually extensive.

Malignant change in nevi is not a common sequellae of any type of nevus except the true melanoma. W. S. Newcomet<sup>11</sup> reported only three malignant degenerations in a series of 506 cases. In my series of 196 cases I have found no malignant sequellae. Perhaps a closer and more extended follow up of many of the apparently cured cases would show subsequent malignant changes directly attributable to the previous treated nevi.

The deeply pigmented mole is more likely to become malignant than the lighter colored one. Certainly the majority of dermatologists do not concur with J. A. Fordyce<sup>12</sup>, in believing that the malignant tendency of pigmented moles is exaggerated. Cannon<sup>8</sup> regards with suspicion any acquired type of nevus, papular or nodular pin-head to small marble size, bluish purple to brownish black, developing at any time during life, especially after the patient has reached the age of puberty, as he considers these growths as frequent precursors of epitheliomas. Metastasis is the rule in malignant nervous growths. If an acquired or congenital type of nevus has begun to grow and to show changes suggestive of malignant change a pathological study of such nevi will confirm the nature of these growths. Klander<sup>13</sup> stresses the occurrence of malignant melanomata which arise from soft pigmented moles, soft hairy nevi and from the so-called blue nevus, which is a non-nevus cell tumor. The same author mentions the spontaneous occurrence of melanomata following pregnancy or after trauma. The most dangerous areas are the heel, the costal margins, face, ear and the nails.

Three years ago a survey was conducted by Traub<sup>14</sup> in which he sent questionnaires to a large group of prominent dermatologists to determine the rational of treating vascular nevi. Among several questions asked was one concerning the spontaneous disappearance of vascular nevi. Less than 10 per cent of that august group of specialists had observed the spontaneous disappearance of a nevus simplex, a nevus flammeus, a nevus araneus, a hemangioma or a cavernous angioma in more than a very few instances. Traub reports that disappearance, when it did occur, was partial and never complete. The cavernous hemangioma very rarely disappear spontaneously, but the fiat vascular nevi, the kind frequently seen in the nape of the neck, often disappear without treatment.

The more common complications of the partially treated or mistreated nevi are deformities, scarring, thromboses and malignant degeneration, often accompanied with metastasis. Time will not permit a complete discussion of

these unnecessary sequellae which unfortunately occur far too often. One should not hesitate to remove the pigmented nevi at sites of trauma or irritation. The time to remove them is before malignant reaction occurs. It is best to avoid excessive manipulation of the nevi and when treating them never do less than completely destroy them.

The cosmetic effect in treating potential epitheliomas should be a secondary consideration. Adoption of the technic best suited for the case is urged, for the cure of cancer depends on early diagnosis and early adequate therapy of the potential epitheliomas. The pigmented mole is one of these so-called premalignant lesions of the skin. As previously mentioned the purpose of this paper is to correlate the various therapeutic technics employed and to endeavor to arrive at some conclusion as to the best methods of the therapy.

Mention is made of the treatment of moles in the Ebers Papyrus of the sixteenth century B. C., and Brandt<sup>15</sup> describes the Grecian mythological treatment of the mole on the head of Pandaros by the gods. With such ancient references, one can see how long the treatment of nevi has been practiced and the fact that there still is no standardized or generally accepted mode of treatment, for these malformations seems unbelievable. Each text-book of surgery or dermatology varies so much in describing the treatment of moles, that it is no wonder the practicing physician knows not which method to follow. Patients go to "cancer quacks" today because physicians have not developed a standardized way of treating cancer of the skin and its precursors. Many of the methods used today in treating nevi are as obsolete as those used by the ancient Egyptians and Greeks.

#### TREATMENT

The methods employed today fall into several groups (1) Irradiation, (2) Surgical methods, (3) Electrical methods, (4) Cauterization, (5) Freezing and (6) Miscellaneous methods.

#### IRRADIATION

Irradiation embraces both radium and roentgen therapy. There is a definite field for irradiation in the treatment of vascular nevi. In evaluating the response to irradiation it is found that the more vascular the lesion, the more radio-

sensitive it will prove to be and conversely the more fibrous the mass the more radio-resistant. Some advise irradiation before surgical removal to cut down peripheral extension of nevi and to reduce bleeding. If vascular nevi are treated by irradiation which is a most excellent way to treat many of the group of hemangiomas, the therapist should be familiar with the part time plays in this method of treatment. The more time taken in the treatment the better the result. This applies to the number of treatments, not to the time of the individual treatment. Care should be taken not to damage the adjacent susceptible tissue in irradiation of vascular tumors of children, however, vascular nevi should be treated at the earliest possible age. Often atrophy of the skin and deeper structures follows extensive irradiation. The type of radium application and the filtration of same is a study too comprehensive to be touched on here, but the field is growing fast as radium is generally considered preferable to roentgen therapy in the treatment of vascular nevi. The use of ultra-violet radiation in the treatment of "port-wine" warts is still adhered to by many, but the relative value of the air-cooled ultra-violet and water-cooled ultra-violet quartz light is debatable.

#### SURGICAL METHODS

The surgical methods employed today include excision by scalpel, and removal by some form of the electro-surgical unit. Electrodesiccation and electro-coagulation are more widely used than any other methods of treating the non-vascular or pigmented group. The high frequency current is coming into more general use. It can be advantageously employed for all types of nevi with the possible exception of certain angiomas. Small nevi are best removed by electrodesiccation and the larger nevi by electro-coagulation. The endotherm knife may be used for deeper nevi instead of the coagulation method. The advantages of the high frequency current are many but it is recommended principally for the quick healing following its use and the resulting thin pliable scars which are usually of a nominal degree. The use of spiral or interlocking sub-cutaneous sutures, as advocated by Beck<sup>16</sup> and Paye's method of implant-

ing magnesium darts to produce occlusion and scarring of vascular nevi are not generally used. Some recommend the use of the electric dental burr in removing moles.

The use of thermo-cautery and actual cautery is employed by many in the treatment of vascular and non-vascular nevi, but the scarring associated with these methods of therapy is excessive. Electrolysis with the negative electrode is used in conjunction with electrodesiccation or electro-coagulation in removing hairy moles. The hairs are first removed by electrolysis, for this procedure is painless. Telangiectasia are frequently treated by electrolysis.

The use of diathermy in the treatment of nevi is not extensive enough at present to warrant its acceptance, but certainly it seems to have a field.

Chemical cauterization is passing into discord, and the use of such caustics as trichloroacetic acid, perchloride of iron, phenol, arsenous acid paste, pyrogallol silver nitrate, sodium ethylate and nitric acid are resorted to by relatively few therapists in treating nevi. There caustics are often used in conjunction with some of the more acceptable methods to remove small residual defects.

Freezing with carbon dioxide snow or liquid air is advocated in some cases of small elevated nevi, but the scarring is objectionable. Usually two or three treatments are necessary to completely destroy the tumors by freezing methods.

The injection of sclerosing agents, such as boiling water, perchloride of iron, and quinine and urea into angioma are accompanied by too much danger to be generally used. Part of the danger of emboli, associated with injections of sclerosing solutions is overcome by tying off the nutrient blood vessels as suggested by Morestin<sup>17</sup>. The injection of quinine urethane as recommended by Dowling in the treatment of cavernous nevus is considered by some to have certain merits.

For the sake of emphasis a resume of the recommended therapeutic measures to be followed in the more common forms of nevi seems to be indicated. Certain apologies are required for selecting one definite plan of treatment from such a mass of therapeutic procedures.



but these selections represent the consensus of therapeutic opinion of a large group of authors.

*Vascular nevi*—In the flat vascular types the modes of treatment are limited and unless treatment is started in early childhood, the nevi flammeus and the depigmented nevi known as nevus anemicus are best left alone. Very excellent results may be obtained in "port-wine" mark with air cooled ultra-violet therapy. Telangiectasis may be treated with either electrolysis or with the electrodesiccator. Both methods of therapy give excellent results.

Nevi-vasculosus are elevated vascular nevi of varying size. Frequent small doses of well filtered beta rays of radium gives excellent results. The time element is of vital importance from a cosmetic standpoint. Radium therapy is the most desirable means of treating large vascular nevi, the scarring produced by other methods is too great to warrant their general acceptance.

The cavernous angiomas involve the deep vessels and are presented as a variable sized tumor masses, often extended quite high above the skin surface. Although this type of nevus has been reported as disappearing spontaneously, this occurs with such relative infrequency that early treatment is advisable. Either roentgen rays or radium may be used in treating these cavernous angiomas. These angiomas are most susceptible to irradiation because of their high vascular content. Lymphangioma respond best to electro-coagulation or thermo cautery, as this form of vascular tumor is radioresistant. In the hemolymphangioma such is not the case, for these tumors have a rich blood vessel content and are very sensitive to irradiation. In destroying nevi, not potentially malignant, destroy all of the lesions, but no more, as cosmetic results are of importance in this group of lesions. The after care of these large nevi following destruction will often determine the type of scar obtained. Remember to warn the patient that it is impossible, except in cases in which ultra-violet therapy can be used efficaciously, to remove a nevus without having some form of residual scar tissue.

#### *Non-Vascular nevi:*

Pigmented macules and patches known as

nevus spilus are best left alone unless they are objectionable from a cosmetic standpoint. Electro-desiccation under local anesthesia seems to be the method of choice if they are treated at all.

In treating the hard verrucous nevi electro-desiccation or excision by scalpel or thermocautery are the common methods selected. The soft verrucous nevi can readily be excised by any surgical method.

The treatment of soft pigmentary nevi depends on the amount of pigment and the cellular structure of the nevus. These pigmented nevi are potential malignancies and in their treatment the importance of complete destruction of the nevus should supercede the cosmetic result. In these precancerous conditions local cauterization, whether chemical or thermal as well as freezing are undesirable, unless the lesions are very small. The hairy nevus can be treated effectively by removing the hairs by electrolysis and later using some form of surgical destruction to remove the nevus proper. The hairless nevi which are usually black, bluish black, or brownish in color and have flat or rounded contours are best treated by surgical excision or electro-desiccation.

The fatty or lobulated nevi are easily excised and give no untoward results. Surgical excision is recommended for the removal of the fleshy pedunculated nevi also. Time will not permit a description of the therapy to be employed in treating the unusual mixed types of nevi, but their treatment is much the same as the other members of this group of non-vascular or pigmented nevi. Complete eradication is urged and no half-way methods should be considered.

#### DISCUSSION

This paper is written to correlate the varied information concerning the treatment of nevi and from this data to formulate some standardized methods of therapy to cope with the complication of common moles. The therapeutic methods given represent the consensus of opinion of a large group of experienced therapists.

There are prevalent today too many conflicting statements concerning the treatment of the

common moles and the complications associated with them.

The burden of proof rests on the shoulders of those who discount the malignant potentialities of certain nevi.

A more extended and thorough follow up of many of the so-called treated nevus cases would prove most discouraging to those who advise extreme conservativeness in the treatment of moles.

Cellular nevi when subjected to prolonged irritation or trauma are best eradicated. It is advisable to remove nevi before malignant reaction occurs. In treating potential malignancies complete removal should supercede the desire for excellent, cosmetic results. It is best to start the treatment of vascular nevi as early as possible, but prolonged treatment is advisable. The time factor is important if one is to secure the best therapeutic results.

There is no one set method that can be applied to all types of nevi, but the field of therapeutic agents or techniques can safely be narrowed to one, and in some cases two rational modes of procedure for each distinct class of nevus. Electro-desiccation comes nearer being the panacea than any other one method.

#### SUMMARY

1. The need of a simple classification of nevi is urgent to enhance the adoption of rational therapeutic measures.

2. In a series of 196 cases of nevi of various types, no serious complications have been discovered, but time may alter the results.

3. The frequency of serious complications occurring in nevi is variable depending on the thoroughness of treatment.

4. A review of the popular methods of treating moles is given, and a summary of these therapeutic measures is formulated and presented as the most generally used procedure for each type of nevus.

5. Complete electro-desiccation seems to be the method most generally used for the pigmented nevi, while radium is the most popular therapeutic agent for the vascular group.

#### BIBLIOGRAPHY

1. Selden, Dr.: *Arch. f. Klin. Chir.* 59:261, 1899.
2. Unna, P. G.: *Die Histopathologie der Hautkrankheiten*, Berlin, 1894. A. Hirschwald.
3. Masson, P.: *Ann. d'anat. path.*, 3:417 and 657, 1926.

4. Pusey, W. A.: *The Principles and Practice of Dermatology*, Appleton Co., 1925.
5. Ormsby, Oliver S.: *Diseases of the Skin*, Lea & Febiger, page 638, 1934.
6. Traub, E. F., *Arch. Ped.*, 51:45, Jan. 1934.
7. McCarthy, Lee: *Histopathology of Skin Diseases*, C. V. Mosby Co., St. Louis, 1931.
8. Cannon, A. B.: *New York Journal of Med.* 29:857, 1929.
9. Ewing, James: *Neoplastic Diseases*, Saunders Co., 3rd ed. 1931.
10. Lehman, C. F.: *Southern Med. Journal*, 19:678, 1926.
11. Newcomet, W. S.: *Radiology*, 22:684, 1934.
12. Pordyce, J. A.: *Journal Am. Med. Assn.*, 51:91, 1910.
13. Klauder, J. V., *Penn. Med. Journal*, 31:472-477, 1930.
14. Traub, E. F., *Arch. Ped.* 50:272, 1933.
15. Brandt: *Arch. f. Derm. u. Syph.*, 84:135, 1907.
16. Beck, Carl, III. *Med. Journal*, 10:411, 1906.
17. Davis and Vilgis, *Southern Med. Journal*, 27:283, 1934.

#### DISCUSSION

Dr. J. N. Roussel (New Orleans): While complimenting Dr. Howles on his excellent paper, I feel that there has been so much said about moles, that I hesitate to add more.

"What was true, is still true. It is hazardous to disregard the learning of the past." But, as President Wilson said of what those in, and around, Washington knew, "it is not all so." I wish, especially, to speak of that part of the literature on moles that played up, so to speak, the great potential malignancy of moles, I think that in a general way is not so. There has been so much said anent the subject, both in the medical and lay press, that the people have become jittery when they think of moles.

During the past thirty-five years, I have seen and removed a very large number of moles, but I am sure that I have only seen about four or five which had undergone malignant degeneration. This may be due to the fact that formerly people only complained of those moles which were under going malignant changes, while at present, moles are being removed for cosmetic reasons only, and as a result, the percentage incidence of malignancy is reduced to a minimum. That malignancy does occur in moles, is academic, but I am unwilling to subscribe to the teaching that the potential malignancy of moles is a matter of such grave importance.

In the removal of moles, my own preference is a fine cautery for the small angioma, radium and surgery for the large vascular nevus, and a combination of the cautery and the dental burr for the hard and soft moles.

The high frequency currents, whether of the Oudin or d'Arsonval type, I do not like for four reasons. First: because the spark is too hot, second: because the proceeding is not easy to control, third: because they require a longer time

to heal, and fourth: because they invariably leave an area of depigmentation, which is highly undesirable, for obvious reasons.

Dr. James K. Howles (Closing): I just wish to say it is not so much the method you use as it is developing your own technic. I think any of the acceptable methods are all right, but it is developing the technic and knowing how to use that particular one.

I have seen Dr. Roussel's results in a number of cases, and they are excellent. I think it is the method that should be adopted and used more frequently than it is.

# CHRONIC EPIDEMIC ENCEPHALITIS: REPORT OF ELEVEN CASES WITH CHRONIC ALCOHOLISM AS THE OUTSTANDING SYMPTOM\*

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In the short time allotted it will be impossible to discuss the subject of chronic epidemic encephalitis in all of its forms, phases and treatment but rather it will be my idea, to review the onset, regional pathology, and the symptomatology and follow this with an orderly presentation of case histories, giving only the positive findings and leaving out all non-essentials.

## ONSET

The onset of encephalitis may be ushered in with a grippe like infection with fever, malaise, headache, etc., or again it may assume the clinical picture of acute lethargic encephalitis and lastly we would remind you that the onset may be so mild or insidious, that the patient is not aware of the malady. Again we would cite the cases of apparent complete recovery, which years later, show an activation of the disease. We would emphasize that the virus or causative agent may lie dormant in the central nervous system for years only to be activated when conditions are suitable to this causative factor.

Von Economo<sup>1</sup> states, "One fact stands out, from our pathological discussion, that the virus of encephalitis lethargica, in cases which do not recover completely, may be present for years in the central nervous system and may produce slowly progressive inflammation and also sudden

advances. This latent condition may be stimulated to an acute flare-up of the disease by pregnancy, for instance, and possibly by other factors." The writer would also add and emphasize alcohol.

Bassoe<sup>2</sup> in 1922 stated "The view is gaining ground that the virus, like that of syphilis, may remain dormant for years and then give rise to a more chronic and degenerative process than the one encountered in the typical disease—necropsy returns from old and prolonged cases, begin to come in and substantiate the view."

Freeman<sup>3</sup>, in 1926, presented clinical, pathological and epidemiological evidence in favor of the view that the so-called sequelae of encephalitis are just as much due to a continuance of the affection as parietic dementia is due to a persistence of the syphilitic virus in the body.

August Wimmer<sup>4</sup> states "Furthermore the experiences obtained with regard to the chronic epidemic encephalitis cases, which have been sadly numerous, soon taught us that these cases may be, and often are, of a chronic and insidious nature from the very beginning."

Netter<sup>5</sup> believes the virus lives in the central nervous system like that of syphilis.

Burr<sup>6</sup> reports five cases of gradually developing Parkinsonism without any acute attacks.

Wechsler<sup>7</sup> states the disease may run an acute, subacute or a chronic course.

## PATHOLOGY

I will not go into the morbid anatomy or the microscopical changes but rather into the parts of the central nervous system involved.

Eaves and Croll<sup>8</sup> studied ten cases histologically and found frequent changes in the pituitary but especially in the substantia nigra and the hypothalamus.

Grinker<sup>9</sup> states that "the acute and chronic mental symptoms, some of which seem irritative, most however, paralytic in nature, refute the exclusive basal localization of the disease. The cortex is frequently profoundly damaged."

Wechsler<sup>10</sup> states that "while no part of the neuro-axis is spared, the basal ganglia, mid-brain region, especially the oculomotor nuclei and substantia nigra and the tegmentum of the pons bear the brunt of the invasion."

\*Read before the Louisiana State Medical Society, New Orleans, April 29-May 1, 1935.

Walter Freeman<sup>11</sup> says "The inflammatory process centers about the substantia nigra in the mid-brain. The involvement of the central gray matter about the aqueduct, extending up into the walls of the third ventricle is the next most characteristic feature. He also states that the corpus subthalamicum and the basal portions of the pallidum and putamen and rhinencephalon may be involved."

Cushing<sup>12</sup> states that "In addition to its highly important relation to the vegetative nervous system, the hypothalamus has come to be looked upon as a place where emotional reactions are integrated."

Cushing<sup>13</sup> also makes interesting observation on encephalitis and the hypothalamus.

#### SYMPTOMOLOGY

The symptomology of chronic encephalitis is most varied and if one is seeing many of these cases, the variety will be as great as that of syphilis in all of its clinical varieties. The vegetative nervous symptoms, the glandular dysfunctions, the visceral neurotic symptoms, the emotional symptoms, which are seen in all gradations and the many and varied disorders, arising from the psychic all tend to make it a disease that challenges the ingenuity of the medical profession, in making a correct diagnosis. We have no Wassermann test of the blood or spinal fluid to give us a positive or negative diagnosis of epidemic encephalitis and for that reason we must exert, and use, all of our knowledge and skill to make a correct diagnosis.

Wimmer<sup>14</sup>, writing of psychotic syndromes of chronic epidemic encephalitis, divides these cases into four subdivisions:—

1. Psychasthenic states or pseudo-neurasthenia.
2. States of depression frequently transitional—sometimes there are stupor and schizophrenic symptoms.
3. Character changes in adults. Here he speaks of dipsomaniac attacks in a patient.
4. Confusional states.
5. Hallucinatory paranoid states with schizophrenic traits.

L. A. Kwint<sup>15</sup> describes a case of "Encephalitis Paranoia."

Lewellys S. Barker<sup>16</sup> states "In men, past middle life, we have had a few cases thought by neurologists and psychiatrists to be either cerebral arterosclerosis or dementia paralytica, which afterward turned out to be encephalitis."

George H. Kirby<sup>17</sup> stated that several of our cases were considered in the beginning to be paresis. From the above statements from the literature, one may see the large variety of symptoms and the different types of mental reactions seen in these cases of chronic epidemic encephalitis.

The cases herein reported all entered or were brought to the Fenwick Sanitarium at Covington, Louisiana, to be treated for chronic alcoholism. A thorough mental, neurogical and physical examination including all laboratory tests are made of all cases and hence the correct diagnosis, in our opinion, of these cases.

#### CASE REPORTS

Case 1. Male, aged 36 years, from West Texas, married but separated four years ago because of social maladjustment. Constantly worrying about his business and health; afraid he is going to lose his mind. Marked constipation (relieved by tincture belladonna.) Emotional condition bad, blue, depressed, says he wants to stop drinking but can't help it. Notices that he can only drink about a third as much as he was able to two years ago. Neurological: Pupils slightly irregular but reacted to light and accommodation. Retinal veins enlarged. Reflexes: Markedly exaggerated in both upper and lower extremities. Laboratory: Red blood cells, 4,975,000; white cells, 6,500. Urine, negative. Basal metabolic rating plus 15. Wassermann: Original method, negative. Tschernogubow modification, negative. Kolmer method, negative. Spinal fluid: Cell count 1, Differential cell count, all lymphocytes; globulin, positive three plus (xxx); Sugar, 55 milligram per 100 c.c.; Total proteins, 56 milligrams per 100 c.c.; Colloidal gold, negative (0000000000); Wassermann, Original method, negative; Kolmer method, negative.

Diagnosis: Chronic epidemic encephalitis, psychasthenic type.

Case 2. Male, single, aged 32 years, entered institution drinking from one to two pints of whisky daily and taking from twenty to thirty capsules of sodium amytal per twenty-four hours, drinking heavy and using the above drug for the past two months. About six months previous he began to be troubled with a marked insomnia, only able to sleep an hour or two at night, extremely nervous—restless, irritable, cross, blue, depressed and with ideas of suicide, violent temper. Would fight on



least provocation. About the same time he noticed fine and rapid tremors of the face muscles, eye-lids and hands (not Parkinsonism).

I had met this patient one year previous when he brought his brother to the institution and the change was most noticeable, from a fine healthy jolly-like fellow we saw the individual change to an individual who was cross, quarrelsome, hyper-emotional, crying and depressed (had been in jail twice because of quarrels) and who explained the situation by saying he knew there was something wrong and had told the doctors so but could not help or prevent himself from going to pieces. The insomnia persisted in spite of the amytal and whisky.

Examination showed slight irregularity of the pupils, both reacted to light and accommodation, slight facial weakness of left side of face, a decided change of facial expression in which most of the facial expression had been wiped out yet it was not of the mask type. Fine rapid tremors of jaw and eye-lids and fingers. Co-ordination was good; tremors disappeared on rest and were not intentional. Sensations, normal. Reflexes were hyper-exaggerated, ego marked, judgment impaired because of the emotional condition. Hysterical and anxiety trends with suicide ideas present. His insight was fairly good, memory good. Laboratory: Red blood cells, 5,275,000; white blood cells, 6,500; hemoglobin 90 per cent. Urine, negative. Basal metabolic rating, minus 10. Wassermann: Original method, negative; Tschernogubow modification, negative; Kolmer method, negative. Cerebrospinal fluid: pressure 5 millimeters mercury. Cell count 3; Sugar, 70 milligrams per 100 c.c.; Globulin, positive three plus (xxx); Total protein, 48 milligrams per 100 c.c.; Colloidal gold, negative, (0000000000); Wassermann: Original method, negative; Kolmer method, negative.

Diagnosis: Chronic epidemic encephalitis—psychoneurotic type with alcoholic and amytal addiction.

Case 3. Patient was brought to sanitarium handcuffed and legs tied and in spite of this he had given four men plenty of trouble, having bitten and kicked three of them. This man was of the periodical type of drinker. Formerly he would get on sprees lasting two or three days once or twice per year. During the past year the sprees are nearer and he is wild and destructive and no one can handle him when drinking. His brothers have noticed that he can drink plenty but that only a few drinks make him crazy. In between sprees he is worried, anxious about his family and business, over conscientious, retiring and recessed. In forty-eight hours after entering the sanitarium he was sober, gave no trouble and co-operated fully with us. There was a complete amnesia for what

had happened when drunk. Neurological Examination: Pupils normal and reacted to light and accommodation, some dilatation of the retinal veins, slight facial weakness on left side, marked exaggeration of lower reflexes. Mental examination showed a quiet reserved individual, who talked very little, rather suspicious and decidedly in his shell. He was classed as a praecox personality. After being off of all whisky and sedatives in ten days he developed hallucinations of hearing that "he had killed his wife and children and the sheriff and a posse were after him." These were the types of delusions and hallucinations with extreme restlessness, violent and maniacal at times, two orderlies were with him constantly, day and night. In about two weeks he became decidedly negativistic, refusing food "because it was poisoned." Later he improved very much. Laboratory: Red blood cells, 5,000,000. White blood cells, 11,500. Urine, negative. Blood Wassermann: Original method, negative; Tschernogubow modification, negative; Kolmer method, negative. Spinal Fluid: Pressure, 12 millimeters mercury, horizontal position. Cell count, 2. Globulin, positive four plus. Sugar, 60 milligrams per 100 c.c. Total protein, 40 milligrams per 100 c.c. Colloidal gold, negative (0000000000). Wassermann: Original method, negative with 2 c.c. of fluid; Kolmer method, negative.

Diagnosis: Chronic epidemic encephalitis—praecox personality and praecox type of mental reaction—periodical alcoholism.

Case 4. Male, aged 59 years, from Mississippi, entered the institution for alcoholism. Drank about one quart of Mississippi moonshine per day, worried about financial affairs and stated the depression caused him to drink. Previous to three years ago he had not taken a drink and was considered a prohibitionist of the most radical type. Stated that he had marked insomnia which started about three years ago. Got blue, depressed, cried easily. Had always been considered hard boiled, now he was always afraid he might hurt someone's feelings, had been scrupulously righteous during the past years. Past Diseases: Negative except for catarrh. Mental Examination: Co-operative, attentive, memory for remote and recent events were perfect. Insight was good, came of his own accord because he knew something was wrong. Six months previous had spent six weeks in another institution in Mississippi but they did not help his nervous condition. Physical Examination: Blood pressure 180/110, no murmurs, otherwise negative. Neurological: Left pupil larger than right, both reacted to light and accommodation, irregular outline. There was a distinct partial atrophy of the left optic nerve. There was a decided weakness of convergence. Facial expression showed worry and tenseness, no mask-like expression. There was a decided impairment of hearing

in both ears but more so in left. Tremors of eyelids and hands, rapid and fine; reflexes upper and lower exaggerated, abdominal reflexes also exaggerated. Laboratory Examination: Red blood cells, 5,075,000. White blood cells, 6,000. Urine, negative. Wassermann: Original method, negative; Tschernogubow modification, negative; Kolmer method, negative. Spinal fluid: Pressure, 6 millimeters mercury. Cell count 1. Differential, all lymphocytes. Globulin, positive four plus. Sugar, 58 milligrams per 100 c.c. Total proteid, 48 milligrams per 100 c.c. Colloidal gold, (5421000000). Wassermann: Original method, negative with 2 c.c. of fluid; Kolmer method, negative.

Diagnosis: Chronic epidemic encephalitis; depressive reaction type; chronic alcoholism.

Case 5. Aged 57 years, lawyer, had drank liquor all of his life. Had been drinking steadily the last thirteen years, excessively during the past year. Drank from one to two pints per twenty-four hours. During the last year whisky had affected him more. Several times after drinking he had had a complete amnesia which he could not explain and which caused him to be alarmed. He gave a typical psychoneurotic history with social maladjustment in the family. His inability to get along with wife, children and all of his immediate family, quick tempered, frequent fights, emotional instability and lack of emotional drive along with periodical headaches and a gastro-intestinal fixation would place him definitely as a psychoneurotic. He has consulted many doctors from Louisiana to New York and other points. Persistent insomnia for past two years and constipation during past twenty-five years. Past History: Influenza several times since 1917. Lumbago 1921. High blood pressure several years ago. Mental Examination: Pleasant co-operative patient; no defects of memory; attention good; insight not good; tends to blame family for his condition because they did not help him. His thinking and acting were more of the emotional type rather than of the logical type. Further observation showed him to be of the "rule or ruin" type with explosions of violent temper, his ego was marked. Physical Examination: Heart regular in rate and rhythm, no murmurs, blood pressure 140/120, no enlargement of spleen or liver. Neurological Examination: Slight irregularity of pupils and exaggeration of all reflexes, fine rapid tremors of eyelids, tongue and fingers. Laboratory: Red blood cells, 4,875,000. White blood cells, 5,500. Hemoglobin 85 per cent. Wassermann: Original method, negative; Tschernogubow modification, negative; Kolmer method, negative. Basal metabolic rating, plus 5. Phenolsulphonephthalein kidney function test: 1st hour, 40 per cent; 2nd hour, 20 per cent. Spinal Fluid: Pressure 19 millimeters mercury in horizon-

tal position; Cell count, 0. Differential cell count, 0. Globulin, positive three plus. Sugar, 58 milligrams per 100 c.c. Total proteids, 35 milligrams per 100 c.c. Colloidal gold, negative (0000000000). Wassermann: Original method, negative; Kolmer method, negative.

Diagnosis: Chronic epidemic encephalitis psychoneurotic type—cardio-vascular-renal disease and alcoholism.

Case 6. Merchant, aged 53 years, drank heavily and steadily during past year. Drank from one to two quarts of gin, first began to drink because he would become so mentally fatigued he could not work. Physically he stated that he did not fatigue much; worry and depression caused him to drink heavily. His wife stated that on some occasions he would become very drunk on two rickies. Alcoholic amnesia became very marked during past month, the most outstanding symptom in his case was the marked mental fatigue and insomnia. He never quarreled or was abusive to his family or business associates. His wife stated he was very depressed at times; he explained this as a hang over. Past Diseases: Flu-pneumonia three years ago. Physical Examination: Negative. Neurological Examination: Facial expression showed a beginning filling out with a slight loss of expression. Fine tremors of eye-lids, tongue and fingers. Reflexes of both extremities were exaggerated. Mental Examination: Insight was good, no exaggerated ego, no memory defects, etc. He stated that he could not think as fast nor did he have the same judgment in business as he had several years ago. Laboratory: Red blood cells, 4,750,000. White blood cells, 12,500. Hemoglobin, 85 per cent. Blood Wassermann: Original method, negative; Tschernogubow modification, negative; Kolmer method, negative. Urine: Albumin, trace, numerous hyaline, granular and finally granular casts. Spinal Fluid: Spinal fluid pressure, horizontal position, 10 millimeters mercury. Cell count, 5. Differential count, all lymphocytes. Globulin, positive four plus. Sugar, 59 milligrams per 100 c.c. Total proteids, 40 milligrams per 100 c.c. Colloidal gold: 021100000. Wassermann: Original method, negative; Kolmer method, negative.

Diagnosis: Chronic epidemic encephalitis with chronic alcoholism.

Case 7. Patient entered the sanitarium because of alcoholism. Began drinking about six months before, because he was nervous, restless and could not sleep. Insomnia would keep him awake until three or four o'clock in the morning. Would usually drink from half to one pint and go to sleep, occasionally he would get on sprees and would become wild, maniacal and destructive. Would fight his own friends. As one of his friends expressed it "I have been on several sprees with him in the

past five years, but on this last one, he was a man gone wild; would not consider the feelings of anyone, rude and cursing in presence of the ladies. When sober he could not remember what happened during the sprees. It was necessary to confine him to jail on two such sprees. When not drunk, he was a model and considerate man to his wife and family." Previous Illnesses: Appendix operation, duodenal ulcer, one year previous. Physical Examination: Large man, 230 pounds, pop-eyed with wide palpebral fissures, expression was beginning to change. Heart, no murmurs, rate 135, blood pressure 180/110, no enlargement of liver or spleen. Neurological Examination: An apparent exophthalmos of both eyes; change of facial expression or a beginning plastic look. There was a slight inequality of pupils, right larger than left, both irregular in outline. Enlarged retinal veins. Fine rapid tremors of hands, tongue and eye-lids. Reflexes, of lower extremities exaggerated. Mental Examination: Quiet individual, well educated, general manager of concern doing \$250,000.00 business per year. No memory defects, no delusions or hallucination, judgment good, defective volition. He explained the sprees by saying that at times he got extremely restless and blue and he could not help getting drunk and ended by saying "Doctor I want you to find out what is wrong because I know I do not feel like I did three or four years ago."

Laboratory: Red blood cells, 5,350,000. White blood cells, 18,250. Hemoglobin, 95 per cent. Urine, albumin, trace, many finely granular and granular cast. Blood sugar, 100 milligrams per 100 c.c. Calcium, 13.5. Phosphorous, 4.2 milligrams per 100 c.c. Basal metabolic rate, plus 37. Phenolsulphonephthalein kidney function test: 35 per cent the 1st hour, 2nd hour 25 per cent. Spinal Fluid: Pressure, horizontal position, 12 millimeters of mercury. Cell count 2. Differential cell count, all lymphocytes. Globulin, positive three plus. Sugar, 75 milligrams per 100 c.c. Total proteid, 40 milligrams per 100 c.c. Colloidal gold, negative (0000000000). Wassermann: Original method, negative; Kolmer method, negative.

Diagnosis: Chronic epidemic encephalitis dipso-manic attacks—hyperthyroidism as a vegetative symptom. In this case with a history of duodenal ulcer it is well to remember Cushing's neurogenic theory as to the possible cause of gastric ulcer being due to an insult or injury to the brain in the region of the third ventricle. This patient has since had a recurrence of his duodenal ulcer.

Case 8. Male, aged 56 years, drank excessively for the previous six months. Drank from one pint to a quart a day. Lately he had been very abusive to his family because they have not given him all the money he wanted. He was boisterous, mean,

vindictive and insulting to everyone when drinking. During the past year, his sisters had noticed a beginning change in his personality; he accused them of being against him and his son, that they did not assist him as they should, etc. As a matter of fact everything he could lay his hands on was spent for whisky and women. This man had held a responsible political position in his community several years previous and was a jovial likable person, always pleasant and a good mixer. From this he became most egotistical, very haughty, quarrelsome and finally got to the point where he was begging his friends for dimes and quarters. He also became very untidy. Past Diseases: Glycosuria for five or six years. Physical Examination: Blood pressure, 140/90, no disturbance of heart, liver slight enlarged. Neurological: I personally knew this patient several years ago and the change was marked. At first sight and appearance I would have pronounced him a paretic. The facial expression was of the plastic type, wide palpebral fissures and an apparent exophthalmos. Pupils, irregular but reacted to light and accommodation. Reflexes were all exaggerated. Mental Examination: Showed a very sensitive and suspicious individual, defective memory and would become confused as to number of weeks at the sanitarium. There were early delusions of grandeur, insight was gone, judgment markedly impaired, trend of thought was impaired. Laboratory: Red blood cells, 4,600,000. White blood cells, 10,250. Hemoglobin, 90 per cent. Basal metabolic rating, zero. Blood sugar, 142.8 milligrams per 100 c.c. Urine, albumin, trace, few finely granular cast. Blood Wassermann: Original method, negative; Tschernogubow modification, negative; Kolmer method, negative. Spinal Fluid: Pressure, sitting position, 15 millimeters of mercury. Cell count 1. Globulin, positive two plus. Sugar, 83.3 milligrams per 100 c.c. Total proteids, 40 milligrams per 100 c.c. Colloidal gold, negative (0000000000). Wassermann: Original method, negative; Kolmer method, negative.

Diagnosis: Chronic epidemic encephalitis, paretic type.

Case 9. Male, 39 years old, single, had been drinking from one to one and a half pints per day. He explained this by saying that he had to have something to steady his nerves and to relieve the inward nervousness and fear of something about to happen or impending disaster. If he got mad or upset he got extremely weak all over and could hardly navigate. He stated that when he was this way a baby could whip him because he was so weak. For the past six months he had been cross, irritable and jumpy; had marked insomnia and could not sleep well. Worried a great deal. He came to the sanitarium after being on a modified starvation diet to build up his nervous system. This



was the straw that broke the camels back. Mental Examination: Well educated man holding responsible position. Memory for recent and remote events good, many anxiety and hysterical symptoms present, narcissistic personality and ego marked, judgment, slightly impaired, emotionally unstable. Neurological Examination: Plastic expression, irregular contour of pupils, reacted to light and accommodation, weakness of convergence and accommodation. Fine rapid tremors of hands, eye-lids and tongue. Upper and lower reflexes increased. Physical Examination: Blood pressure 120/70, no murmurs. Laboratory Examination: Red blood cells, 5,000,000. White blood cells, 13,500. Basal metabolic rate, plus 18. Urine, negative. Blood Wassermann: Original method, negative; Tschernogubow modification, negative; Kolmer method, negative. Spinal Fluid: Pressure, 4 millimeters of mercury, horizontal position. Cell count, 1 Differential cell count, all lymphocytes. Globulin, positive three plus. Sugar, 50 milligrams per 100 c.c. Colloidal gold, negative (0000000000). Total protein, 30 milligrams per 100 c.c. Wassermann: Original method, negative; Kolmer method, negative.

Diagnosis: Chronic epidemic encephalitis, psychoneurotic type—chronic alcoholism and mild hyperthermia.

Case 10. Male, aged 54 years, banker and capitalist from Mississippi, had been drinking steadily for the past six months. Before that he only took an occasional drink, had influenza in 1928 and since that he had weak spells. These spells are brought on by laughing hard, eating too much sugar and also by watching aeroplanes do stunt flying. He stated that these spells of inward nervousness made him weak and dizzy. He could always stop them by taking a small swallow of antiseptic and also by rubbing some on his head which is bald. This antiseptic contained oil of peppermint and was cooling in effect. Has had many headaches during the past year. He had worried a great deal and at times would leave his business for a week or so at a time to get himself together. Prior to one year ago he was one of the most exemplary men in his community, did not drink but occasionally, did not run around, but in the past six months he had been drinking steadily, going on wild parties three or four times per week and being the play-boy of his section. This was a complete reversal of the man's personality. Mental Examination: Many anxiety and hysterical trends present. He was either in a very good humor or blue and depressed. Worried about his behavior changes. No defects of memory or grandiose ideas, no delusions, insight good, judgment ruled by his emotional condition. Neurological: Slow drawing speech, not of the monotone type.

Slight facial weakness of right side of face. Pupils, irregular but reacted to light and accommodation. Enlarged retinal veins, fine rapid tremors of hands, eye-lids and tongue. Reflexes, lower extremities exaggerated. Physical Examination: Negative. Laboratory: Red blood cells, 5,050,000. White blood cells, 7,000. Hemoglobin, 90 per cent. Urine, negative. Basal metabolic rate, plus 14. Wassermann: Original method, negative; Tschernogubow modification, negative. Spinal Fluid: Pressure, 8 millimeters of mercury, horizontal position. Cell count, 2. Differential cell count, all lymphocytes. Globulin, positive three plus. Sugar, 75 milligrams. Total proteins, 56 milligrams per 100 c.c. Colloidal gold, negative (0000000000). Wassermann: Original method, negative; Kolmer method, negative.

Diagnosis: Chronic epidemic encephalitis; chronic alcoholism; cataleptic weakness of emotional origin.

Case 11. Male from Alabama, 33 years old, drank every day since 1930, excessively for the last year. Drank from one pint to a quart a day, drank because he did not feel good, always tired, would have spells of severe depression every once in a while, worries a whole lot about nothing. Past illnesses: No influenza; typhoid in 1913; angioneurotic edema frequently during past year. Physical Examination: Heart normal, blood pressure 125/80, otherwise negative. Mental Examination: No memory defects, no delusions or hallucinations, anxiety trends present with emotional instability. Insight, good. Judgment, not impaired. Neurological Examination: Facial expression of the plastic type. Right side facial paresis and a mild right facial atrophy. Right pupil smaller than left, both reacted to light and accommodation. Fine rapid tremors of eye-lids and hands, none of tongue. Reflexes of upper and lower extremities exaggerated. Laboratory Examination: Red blood cells, 4,750,000. White blood cells, 11,000. Hemoglobin, 80 per cent. Urine, negative. Basal metabolic rating, minus 15. Wassermann: Original method, negative; Tschernogubow modification, negative; Kolmer method, negative. Spinal Fluid: Pressure, 5 millimeters of mercury, horizontal position. Cell count I. Differential cell count, lymphocytes. Globulin, positive four plus. Sugar, 62 milligrams per 100 c.c. Total protein, 64 milligrams per 100 c.c. Colloidal gold, negative (0000000000). Wassermann: Original method, negative; Kolmer method, negative.

Diagnosis: Chronic epidemic encephalitis, psychoneurotic type, chronic alcoholism.

#### SPINAL FLUID

These findings, when properly interpreted, are of the greatest positive value. The cell globulin ratio, which is broken resulting in a



cell-globulin dissociation is diagnostic of this condition. Most writers mention a high sugar content but, in my opinion, this is present in only about fifty per cent of the cases. The high sugar content, obtained in the earlier epidemics, was partly due to the fact that at that time the Folin method of sugar determination was in use and this normally gives a higher reading than the Folin Wu method now universally used. Readings above 85 milligrams are the exception and not the rule in my experience. The presence of globulin is always indicative of an inflammation and anything above a "trace" must be considered pathological. The total proteid increase above 40 milligrams should always be considered pathological. The colloidal gold test is corroborative. The cell Wassermann dis-association should help rule out syphilis.

#### CONCLUSIONS

1. Alcoholism will activate a latent case of chronic epidemic encephalitis.

2. Alcoholism will intensify an already active case.

3. The emotional sphere is especially involved but the higher intellectual faculties are not exempted in chronic epidemic encephalitis.

4. During the past several years we are seeing more of these cases than those of neurosyphilis.

5. Spinal fluid findings, when correctly done, are most valuable and are necessary to eliminate functional conditions.

6. All of these patients had a lowered cerebral resistance to alcohol; alcoholic amnesia was frequent.

8. Institutionalization of these cases is most essential.

#### BIBLIOGRAPHY

1. Von Economo, Constantine: Epidemic lethargic encephalitis, page 147, Oxford Press, 1929.
2. Bassoe, Peter: Diagnosis of epidemic encephalitis. J. A. M. A. 79:22-25, 1922.
3. Freeman, Walter: Chronic epidemic encephalitis, J. A. M. A. 87:1601-1603, 1926.
4. Wimmer, August: Chronic epidemic encephalitis, page 2, William Heinman, Ltd., London.
5. Netter: quoted by Wimmer, page 1.
6. Burr, Charles W.: Sequelae of epidemic encephalitis without any preceding acute illness (chronic encephalitis), Arch. Neuro. and Psych., 14:20-24, 1925.
7. Weschsler, I. S.: Clinical Neurology, page 406, W. B. Saunders, Philadelphia, 1931.
8. Eaves, Elizabeth Cooper and Croll, Margaret: Pituitary and hypothalamic region in chronic epidemic encephalitis, Brain, 53:56-75, 1930.

9. Grinker, Roy R.: Text book of Neurology, page 695, Charles C. Thomas, Springfield, Ill., 1931.
10. Weschsler, I. S.: Clinical Neurology, page 403, W. B. Saunders, Philadelphia, 1931.
11. Freeman, Walter: Neurophthology, page 132, W. B. Saunders, 1934.
12. Cushing, Harvey: Pituitary body-hypothalamus and parasympathetic nervous symptoms, Chas. C. Thomas, Springfield, Ill., 1932.
13. Wimmer, August: Epilepsy in chronic epidemic encephalitis, Acta Psychiatrica et Neurol., 3:367-407, 1923.
14. Kwint, L. A.: Eine paranoide variante der post-encephalitischen psychotischen Zustände, Arch. F. Psychiat., 78:375-382, 1926.
15. Barker, Lewellys:—
16. Kirby, George H.:—

Acute epidemic encephalitis an investigation by the Association for Nervous and Mental Research. Report of papers and discussions at New York, page 113, Paul Hoeber & Co., New York, 1920.

#### DISCUSSION

Dr. Arthur A. Herold (Shreveport): The essayist has covered a large amount of ground in this paper and it is too bad he had to read it so rapidly on account of the late hour.

I think we are in accord as to etiology. The question comes up whether they are not classed wrong, that is those patients with evidence of paralysis agitans or Parkinson's disease, why is it not possible that these patients have the encephalitic infection in their brain and alcohol brings it out?

Insofar as onset, to which Dr. Young refers, I am sure all of us have seen such cases, in young men who gave no history of previous disease but whose onset of encephalitis was very insidious. We have seen again that after going thoroughly into their cerebrospinal fluid findings, the other conditions were eliminated. I feel that in the cases Dr. Young has reference to we are going in a vicious circle. The encephalitis aggravates the chronic alcoholism, lessens the resistance and causes the patient to progress further.

Dr. Young closes with the suggestion these patients should be hospitalized. I think they should be hospitalized on account of this vicious circle, as early as recognized.

Dr. J. D. Young (Shreveport): I fail to agree with Dr. Roy Carl Young from Covington. Since alcoholism does produce encephalitis such as the Wernicke type, cannot these be cases of alcoholic encephalitis? How is Dr. Young able to differentiate them from chronic epidemic encephalitis? I say until more work is done along this line, and that these cases of alcoholism are proven to be epidemic encephalitis, which, in turn, has caused these personality reactions, resulting from a virus, I will withhold my judgment in these cases. I still believe, and have seen many cases of alcoholic encephalitis, but the epidemic form is a very special type.

Dr. Walter J. Otis (New Orleans): Dr. Young has brought up a number of features and in each

case we are to understand that these people have had typical encephalitic syndrome. The encephalitis started as we date other epidemics of this, that, or the other. Along comes Schilder and Bernard, former Research Professor of Psychoneurology, who has recently been doing work on this, only no mention is made of the encephalitic syndrome. But these individuals who are alcoholic have displayed the syndrome.

I hope his cases did not have the duplicate survey and besides that I am afraid he will have to battle with his brother.

Don't forget medico-legal involvements. Still the individual quite alcoholic and want to say encephalitic picture due to this that or the other, whereas by scientific investigation you will find the individual primarily alcoholic and nothing to prove the man had encephalitis.

Dr. L. L. Cazenavette (New Orleans): I feel that the subject of chronic encephalitis is a very interesting one and that first of all, to make a diagnosis of chronic encephalitis is not at times very easy. We see a number of cases that are diagnosed, with some hysterical manifestations, some psychoneuroses, which we find after a prolonged examination due to the presence of encephalitis symptoms. But chronic encephalitis may present itself in so many ways. We cannot say we are going to have a group of symptoms and call it encephalitis, because it might give rise to different symptoms as one individual differs from another.

As far as alcoholism having anything to do with encephalitis, it seems to me chronic alcoholism is such a common affectation that the individual who had chronic encephalitis would be more likely to fall into that habit and become dipsomaniac. In that way, he may develop chronic alcoholism which may have been dormant for sometime in him.

Dr. Wm. H. Harris (New Orleans): I have had the good fortune of being to some extent connected with the cases of Dr. Young. We know that when we consider the so-called lethargic encephalitis, we bring in the question of filterable virus, globoid bodies, and the observations made upon the pathology of such conditions.

From the laboratory and pathological standpoints, I am naturally interested in this splendid presentation but as to the clinical entity of this series of cases, I am not prepared to discuss. We know as pathologists that the lesions of encephalitis show marked round cell perivascular accumulations as well as degenerative changes. Even perivascular hemorrhages may at times be shown. Lesions may at times be purely degenerative and according to the extent thereof reparative fibrosis may or may not occur.

There has appeared in a recent number of the American Journal of Pathology, a very able article on encephalitis, dealing with the pathology and causes other than those of specific virus. The author does bring out in this article the fact that we get in acute alcoholism definite hemorrhagic perivascular changes. The present cases, however, deal with chronicity in which degenerative changes are in order. The laboratory findings are those of degeneration products. It is evident that the allied spinal fluid observations form a valuable factor in the clinical observations of such types of cases that Dr. Young has so thoroughly presented.

Dr. Roy Carl Young (In conclusion): I have enjoyed the discussion very much and am glad the doctors brought out the points in discussion that they did.

In the first place when I was associated with Doctor J. D. Young in the practice of neuropsychiatry in Shreveport we saw quite a few cases of chronic epidemic encephalitis and these cases showed the same changes and symptoms with the exception of alcoholism, as those reported today. The Shreveport cases did not show the marked and intensive changes in the spinal fluid. There is no question but what alcohol intensifies the disease and will activate a latent case.

In regard to Doctor Otis' question regarding the medico-legal aspect of the case. I would say that injury to the head will often aggravate and possibly activate a latent condition. The possibility of marked emotional upsets and the psychic trauma as a result of accidents to other parts of the body than the head in cases of chronic epidemic encephalitis must be borne in mind because the emotional sphere of these cases is especially involved.

The cases reported in this paper would in the majority be classed as functional on superficial examination as there were but few neurological signs and these were not marked. They would run the gamut from the psycho-neurotic classification to the paretic classification. The reflexes are at times exaggerated. I would again emphasize that the disease can simulate any type of clinical entity.

In regard to Doctor Young and Doctor Otis' views on these cases being alcoholic encephalitis I would emphasize that I have shown and proved conclusively by the spinal fluid that these were cases of inflammation and if the Doctors would remember their pathology, chronic alcoholism, alone and uncomplicated, produces a degeneration and not an inflammation. Let them consult Freeman on neuropathology, Grinker Neurology, and Delafield and Prudhomme on pathology. Also

very important, the spinal fluid of the chronic alcoholic does not show the changes mentioned above.

Comparing the cases mentioned above with "Wernicke Alcoholic Encephalitis" is absurd. These patients were all up and about, and cannot be compared with those of the Wernicke type, which by the way is always fatal in a comparatively short time.

In regard to the autopsies, the findings of chronic alcoholism is entirely different from those dying with acute alcoholic poisoning and the finding of the chronic types of epidemic encephalitis is different from the two mentioned above.

In conclusion I wish to express my sincere thanks to Doctor Harris and Friedrichs of New Orleans and their assistant Miss Lucille Montz for their cooperation and suggestions in regard to all of our laboratory work of which they are in complete charge and to Doctor H. E. Gautreaux for the invitation to present this paper.

#### ASTHENOPIA AND HEADACHE, NOT OF OCULAR ORIGIN. DIFFERENTIAL DIAGNOSIS\*

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Patients often consult the ophthalmologist for headaches which they presume to be due to their eyes. Often they will not have had a physical examination. While it is not in the province of the ophthalmologist to enter into a medical examination it is his duty to carefully investigate the patient. If the ophthalmological examination does not reveal the ocular apparatus to be at fault, he should be in a position to advise the patient how to proceed to obtain relief. It is unsatisfactory to the patient and to the ophthalmologist to end the consultation by saying "your headaches are not due to your eyes".

Headache is a symptom; the explanation is largely built upon conjecture, since it is unaccompanied by definite pathology. Circulatory imbalance was thought by the ancients, and is still so considered, to be the

probable cause of headache. Cobb concludes that the vessels of the brain respond in the same way to vasomotor control as those of the other parts of the body but probably less strongly.

Hirschfelder has shown that the dilatation of the retinal vessels is produced at the same time as that of the pial vessels. It appears that the entire nervous control of the circulation of the blood within the central nervous system lies in the pia mater. The small arteries of the pia are enmeshed in nonmedullated nerve fibres which end in a spiral course. The arterioles have very complicated nerve endings, these nerves not coming from the nerves of the vessels but from the nerves found free in the connective tissue of the pia. These nerves are found only in the pia of the cerebrum.

Differences in tension in these tissues occasioned by changes in the volume and pressure of the blood may and probably do result in changes in the movement of the cerebrospinal fluids.

The mass of nerves over the vegetative centers in the third and fourth ventricles is greatly increased. This probably means exceptional protection for these underlying centers against changes in pressure, mass and composition of the cerebrospinal fluids.

According to Potts this nerve supply of the meninges accounts for the frequency of headaches accompanying disturbances of other organs.

#### CHRONIC NEPHRITIS

Headache due to this cause may be difficult to diagnose. There may be few subjective symptoms. Such individuals have weakness and undue fatigue. The vascular hypertension associated with nephritis is the most frequent cause of the headaches. Particular attention should be paid to the diastolic pressure, which is more constant than the systolic and is a truer indicator of the arterial condition. It is less affected by emotion. The ophthalmoscope gives the most important data in the diagnosis and prognosis of headache due to chronic nephritis. Next in importance is the urinalysis, properly done. Too great emphasis cannot be made

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upon this last mentioned examination. Comparison of night and day specimens; testing the specific gravity after full and heavy diet; microscopical study of sediment from a fresh specimen and proper interpretation of the findings are important.

#### VASCULAR HYPERTENSION

We should recognize two types of vascular hypertension.

1. Functional: due to certain neurocirculatory states, emotional disturbances or disease which temporarily disturbs the circulation.

2. Organic: due to structural changes; more or less persistent and accompanied by diseases of the heart, kidneys and arterial system. A guarded prognosis should be made since it is difficult to say whether or not a patient is suffering from organic diseases.

In those with organic disease we must distinguish vascular disease with hypertension from chronic nephritis with hypertension. Vascular hypertension may be the forerunner of chronic nephritis.

Some authors state that the headache of vascular hypertension is likely to begin after midnight, awakening the patient in the morning and disappearing in the afternoon. This may be accounted for by venous stasis; its disappearance by the equalization of the circulation by the activities of the day. When the headache is intense and refractory, it is ominous of cerebral complications. The headache of chronic nephritis may assume the form of ophthalmic migraine and remain an isolated phenomenon for a long time.

In headache with gastro-intestinal disturbance and nervousness, chronic alcoholism should be suspected.

Excess in the use of tobacco is a more common cause of headache than formerly. It disturbs the digestive and vasomotor mechanism and in this way aids in the production of auto-intoxication and the train of evils coupled with it. There is no doubt that in the last fifteen years the abuse of tobacco has increased, particularly among young women. This is a matter to which we might

well give more attention. It is obviously difficult or impossible under the present conditions to know precisely the ill effects from the excessive use of tobacco. It is perhaps one of the slowest poisons. From clinical observation one might suspect that the ill effects of its excessive use are visited more particularly upon the nervous and vascular systems, especially the latter. In my opinion this is probably brought about by the disturbance in the metabolism and nutrition. It annihilates, in many instances, the appetite and thus leads to irregular eating and possibly a perverted appetite expressing itself in a desire for highly seasoned and other foods of this character. Thus, disturbance of digestion and assimilation is produced. This in turn may cause low grade auto-intoxication of intestinal origin, resulting in various metabolic disturbances. In the light of our present knowledge it would probably not be possible to prove this by laboratory experiment. However, careful clinical observation of a number of years has convinced me that the excessive use of tobacco is responsible for auto-intoxication of this type. The use of tobacco in the form of cigarettes has enormously increased, particularly among young women and they use tobacco in this form to excess, even more than men; a bad and vicious habit which results in chronic ill health with constant headaches and disturbance of the ocular apparatus.

#### CARBON MONOXIDE

This is a frequent cause of headaches. It may occur in the cabins of aeroplanes. The Chief of the Army Air Corps said in a personal communication to me that it is probably the cause of some of the unexplained crashes. Tightly closed automobiles, particularly those with heaters; bathroom heaters; automobile repair shops in winter, etc. may cause chronic low grade monoxide poisoning of which headache is a symptom. Personally I never have a headache, but on a trip by plane from Cleveland to Washington I had a severe one. Though I have traveled much in aeroplanes this had not happened before. The cabin of the plane on



the trip referred to was poorly ventilated. I think the headache was due to monoxide.

A lady consulted me suffering with morning headaches. The eyes were not at fault. Investigation revealed that she habitually read late at night with a gas bedside lamp for illumination. The rubber tube had become leaky and she was getting enough monoxide to cause the headaches.

Traffic officers in crowded and illy ventilated sections may suffer from it.

"Powder sickness" or "powder drunk" is due to monoxide. In dug-outs, quarries, mines, etc. where the explosion occurs in a poorly ventilated place this is apt to occur. Monoxide headache is thought to be caused by the cerebral congestion and edema produced by the gas.

#### ANILIN AND ITS DERIVATIVES

Headache caused by these substances is frequently accompanied by cyanosis, ashen pallor, subnormal temperature and dermatitis. The last is important in the diagnosis.

#### TOXIC PUTREFACTIVE SUBSTANCES

These substances in the general circulation and the failure of the liver to synthesize them, may be a cause. This results in vascular changes in the brain or viscera, which may be anaphylactic in character and analogous to Quinke's disease. Benefit sometimes results from changing the intestinal flora. Food allergy appears to play a part in many cases.

There are two theories as to the cause; the vascular theory and the reflex theory. It is doubtful if an eye reflex can be the actual cause of migraine.

Night attacks will leave sore eyeballs and hyperaesthetic spots on the scalp. The eyeballs may be tender to pressure. There may be no day attacks. It is very important to recognize migraine of this type. Those so affected suffer from photophobia, headache and asthenopia on attempting to use the eyes. Since the symptoms are apparently due to the use of the eyes the patient naturally concludes that the headaches are due to the strain.

Attempts to use the convergence and accommodation in migraneous patients fre-

quently cause discomfort and yet the accommodation and convergence may be found to be normal on examination. Early fatigueability of these two functions may occur in such patients. The hypersensitivity of the eyes of migraneous patients is worthy of careful consideration; unrecognized it may lead the ophthalmologist into unfortunate error. The nocturnal form of migraine may explain the cause of the tender eyeballs or the soreness of the extraocular muscles, of which some patients so frequently complain. They often suffer from photophobia for which no adequate cause can be found. They may be placed in that class of patients we term "neuroses" unless recognized. This is unfortunate for the patient and the physician.

No discussion of the ordinary migraine and the cause of migraine will be attempted here but some of the usual symptoms will be discussed.

Early symptoms of an attack may be spasm of the orbicularis, partial ptosis, photophobia, lachrymation, slight blurring on reading, photopsiae to one side or the other; cloudy spots which follow movements of the eyes; diplopia; mental depression and despondency, or conversely a feeling of unusual well being. These symptoms may disappear without the headache or they may occur occasionally during the day without the headache, the latter occurring at night. Following the night attack there may be irregularity of the pupils, the larger pupil being on the affected side. Often the pain will be limited to the eyes. Attempts at convergence and accommodation, as have been mentioned, augment the pain.

Associated with migraine there may be edema, urticaria, asthenia, paroxysmal tachycardia and periodic vomiting; the last may be a migraneous equivalent.

Malarial fever and brain tumor may cause migraine attacks. Primary onset of migraine-like attacks in adult life should always awaken the suspicion of organic brain lesion. It is my custom in those suffering from migraine, particularly in adults, to take the visual fields. Occasionally one may pick up a case of brain tumor which has not been

suspected. We may remember Harvey Cushing's admonition that "brain tumor that can be diagnosed early in the disease offers a much better prognosis than after the classical symptoms of vomiting, slow pulse and headache have appeared".

It is important to recognize whether we are dealing with a migraine of the classical hereditary type or a symptomatic migraine, the result of organic disease, such as trauma, contracted skull, cerebral tumor, cerebral edema, hydrocephalus, encephalitis, arteriosclerosis, meningitis or onset of tabes. Care should be taken to distinguish the two types. It is very important that the ophthalmologist bear in mind the difference.

Robey describes three types of migraine. This classification, while perhaps not strictly scientific, is very helpful:

1. Ophthalmic: the usual type.
2. Ophthalmoplegic.
3. Symptomatic: the result of organic brain disease.

In speaking of the usual form the following observation is of particular interest. It is hereditary in 90 per cent of the cases. It is probably inherited as a dominant trait, Mendelian in character.

The ophthalmoplegic form of migraine is rare. I have had one case under observation for about ten years. This patient had very severe migraneous attacks confined to the right side of the head, associated with partial paralysis of the third nerve on this side. The last attack occurred several years ago and resulted in a partial permanent paralysis of the third nerve. Careful study of this case has revealed no ascertainable cause.

#### ARTERIOSCLEROSIS

Those suffering from arteriosclerosis particularly when associated with arterial hypertension are prone to have headache and ocular disturbances. This seems to be particularly true when there is sclerosis of the retinal vessels. I think we may assume that in the majority of cases where there is sclerosis of the retinal vessels there is also more or less sclerosis of the cerebral vessels. One may see the most profound asthenopia in headache on attempting to use the eyes

for near work. It appears to be more marked in those cases presenting a veiled retina than in any other form of sclerosis of the retinal arterioles. There is no more obstinate and persistent form of headache and asthenopia than this form. Such patients are prone to blame their symptoms on their eyes and on their glasses, because attempts to use the eyes for near work immediately produce headache. Likewise, they are very difficult to refract; frequently they cannot distinguish between one-half or one diopter in changing the test lenses, so that a correct manifest refraction is impossible.

Since they are usually elderly subjects it is my custom to do a retinoscopy without a mydriatic or cycloplegic in order to get a more accurate refraction. The eyes of such subjects are often very sensitive to slight errors in refraction and since the manifest refraction at the trial case is often totally misleading, they present difficult problems at times. While undergoing a manifest refraction they frequently present a characteristic reaction which I have termed the "arteriosclerotic reaction". It consists of "fading" of the test letters and inability of the patient to distinguish between test lenses of different strengths or cylinders at different axes and of different strengths.

Meticulous care in examination of the eye is necessary. In certain cases it is necessary to enlighten the patient as to the cause of his symptoms. I usually take the blood pressure, explain in full to the patient the cause of the symptoms and refer her to her physician. Due caution should be used in inviting the patient's attention to arterial hypertension and arteriosclerosis.

#### IMPROPER LIGHTING

Insufficient attention has been paid to the effect of improper lighting in the causation of headache of ocular origin. Not infrequently we correct the refractive error but the headaches and asthenopia continue. In looking for the continuing cause poor lighting should be considered; not only poor artificial lighting but badly arranged daylight should be given consideration. A case in illustration is as follows: The patient, a

private secretary, had headache and asthenopia in the afternoon. She had a moderate refractive error which was corrected but the headaches continued. Investigation revealed the fact that she sat facing a white wall across the street upon which the afternoon sun shone brilliantly. Upon changing her desk to face away from the light her symptoms were relieved.

A brilliant source of light in the field of vision; reading in a darkened room with only a brilliant source of illumination on the page; reading by insufficient light, may all be the cause of ocular symptoms. This subject of course is a large one and there is not sufficient time to dwell upon it here.

#### ENDOCRINE DISORDERS

This is, of course, an important subject and one which requires careful thought and application of much common sense.

#### THYROID DYSFUNCTION

With the possible exception of arteriosclerosis no class of patients suffer with more persistent asthenopia and headaches than those with thyroid dysfunction. The headaches and asthenopia may be among the earlier symptoms so that the ophthalmologist is frequently the first to be consulted. Unless these cases are recognized they may prove to be insoluble problems to the ophthalmologist.

Lachrymation may antedate the other symptoms by months or years; several such cases have come under my observation.

It is the ingravescent forms, with headache and asthenopia, which may be unrecognized and which when recognized are very difficult to treat. After the disease is established it is, of course, easy to recognize. After treatment, surgical or otherwise, it has been my observation that the ocular symptoms persist for years and possibly permanently. The cause of this asthenopia and headache is not always easy to determine. In many cases there is found no definite reason. The extraocular muscles are often at fault, the exophoria of exophthalmic goitre being the form of muscular imbalance most frequently encountered. There may be various muscle imbalances and pareses which

may not be amenable to treatment. There may be a convergence weakness and an accommodative weakness, which may be the cause of the persistent symptoms. Transient changes in the intraocular tension may be noted. The headache may be associated in the mind of the physician with the increased tension of the globe and the true cause of the headache, i. e. thyroid dysfunction, may be over-looked. There are usually no fundus changes in this form of elevated intraocular tension. Marked pulsation of the arteries may be noted in hyperthyroidism. This may further mislead one into the diagnosis of glaucoma.

Some individuals may show ill health associated with headaches centered chiefly about the eyes and made worse by near work and yet careful examination is essentially negative. Such cases should be very carefully considered as possibly having their origin in thyroid dysfunction.

Hypothyroidism is particularly difficult to diagnose. The only efficient test may be the therapeutic one. Headache associated with neuresthenia or an exhaustion syndrome, fatigue, depression and mental sluggishness are often symptoms. The most obstinate asthenopia and headache may be present on attempting to use the eyes for near work. The persistent headache may be due to vascular hypotension and the resultant impairment of the cerebral circulation. Probably many of the ocular symptoms are due to neuromuscular adynamia from the same cause.

The thyroid incompetency affects the extraocular and intraocular muscular tone as it does the general muscular system. Such individuals show general early fatigability associated with fatigue of the convergence and accommodation. Hence, the patient cannot use his eyes but a short time without headache and asthenopia.

In hypofunction of the thyroid gland specific diagnostic methods are lacking. It may occur in all ages. In children it may cause behavior problems; at puberty diminished endurance, anaemia, nervous disorders or extreme physical and nervous exhaustion in

young adults. Mild psychic disorders, poor memory and difficulty in concentration may occur.

#### HYPOGONADISM

These remarks are largely quoted from Marinus in his course before the Postgraduate Instructional Section of the American Academy of Ophthalmology and Otolaryngology in 1933.

Hypogonadism is a deficiency of the internal secretion of the gonad. We are entirely aware of the double function and secretion of the gonads. The internal secretion of the ovary is active long before menstruation begins and long after it ceases. This internal secretion of the ovary apparently exerts its activity upon the vegetative nervous system as a whole, acting as a stabilizer to its functions. In this it might be considered as an antagonist of adrenalin. Deficiency of the ovarian hormone results in instability of the vegetative nervous system. This is evidenced by the vasomotor instability as shown by the hot flashes, red blotches and areas in the skin and the red or white lines following a slight scratching of the skin. The deficiency results in a state of hyperirritability of the vegetative nervous system, which makes possible the explanation of many disturbances observed in the various fields of medicine. The emotional disturbances observed in hypogonadism are thus explained. The excessive reaction to emotional stimuli may work in either direction, euphoric or melancholic. The coincidence of an unstable emotional personality together with the physical symptoms produced by the overactive vegetative nervous system is frequently considered to be a psychoneurosis and so treated, the physical basis being omitted from consideration.

There are two groups of hypogonad cases:

1. Developmental: failure of gonad development resulting in the eunuchoid type of individual. It may be inherited but is more frequently due to deficiency of the sex hormone of the pituitary, to thyroid deficiency or inflammation of the ovaries during the development period. Such cases are emotionally unstable, have lack of self confidence,

inferiority attitudes and an inability to face the responsibilities of life. They frequently suffer from nervous dyspepsia, or a spastic colon with a secondary colitis. There may be tachycardia on emotion or exertion. The respiratory mechanism may be involved resulting in uneven or sighing respiration, alternating with regular breathing. Abnormal perspiration as evidenced by excessive sweating of the palms, axillae, etc.

2. Decreased function of the gonads after puberty.

The symptoms in the female may not develop for five to seven years after operation where a portion of the ovary remains. The symptoms bear no relation to the presence or absence of menstruation. The rhythm of menstruation is controlled by the pituitary gland. The cycle persists long after castration and the normal menopause. The changes resulting in production of the next menstrual period begin about two weeks before the onset of the flow. In hypogonadism the symptoms begin at this point and reach their maximum at the time menstruation is due. Delay or failure of the menstruation causes a marked increase of the symptoms. Symptoms occurring regularly during this interval before the period are partially at least due to ovarian deficiency. The rhythmic increase of symptoms at the time the period is due is observed many years after the natural menopause. Severe symptoms may mask this rhythmicity. The absence of the rhythm usually indicates the condition is not one of hypogonadism. The menstrual history is of little value in determining a diagnosis of hypogonadism. "There is a high incidence of astigmatism in hypogonadism, which is frequently variable so that examinations and new lenses are necessary at short intervals." (Personally, I think this would have to be verified). Symptoms of eye strain are observed from very small errors of refraction which would ordinarily be well tolerated. There is also a high frequency of ocular muscle imbalances. They are frequently corrected by glandular adjustment. The astigmatism may lessen but does not disappear. It may be an etiological factor in myopia.



Headache is an exceedingly common symptom in hypogonadism. Such a headache in the absence of or after correction of a refractive error is suggestive of hypogonadism in the absence of other causes.

Hypogonadism may also stimulate hay fever and thus affect the eyes. (Periodic attacks of "conjunctivitis" are frequently seen in young persons, females in particular and may be dependent upon this condition in a mild degree). A certain proportion of them may be allergic. Those showing slight skin reactions to many antigens but with no marked reaction to any one antigen suggest the possibility of hypogonadism. The same thing applies to asthma. During this abnormal state infection of the nasal accessory sinuses is invited. Surgery may appear to be called upon but the rhythmic disturbances continue to occur, after the surgical interference. This may account for many poor surgical results.

Treatment of hypogonadism in the male is not particularly successful. The recently prepared concentrated sex hormone specifically relieves the symptoms of hypogonadism but is so rapidly excreted that the results are not practical. "I have used the female preparation in the male with poor results in the majority of cases. The possibility of benefit justifies the therapeutic test".

In young girls with the primary type of hypogonadism therapy should be directed toward completion of ovarian development rather than the relief of symptoms. It is frequently possible by the use of the sex hormone obtainable from the urine of pregnant women, to stimulate ovarian development to the point of permanent cure. The efficiency of treatment should be judged not by the relief of symptoms but the increased development of the uterus and pelvis and increase in the secondary sex characteristics. If and when ovarian development is obtained the specific hypogonad symptoms will decrease.

Hypogonad cases after the age of twenty will not require the above treatment but will require treatment with substantial ovarian

therapy. Whole ovarian extract is given hypodermically daily or every second day until the symptoms are controlled. This will be evidenced by a sense of well being and of complete adequacy. The prognosis of hypogonadism as to the relief of symptoms in group 1 is excellent in the absence of complications. In the primary type of hypogonadism 50 per cent are cured. In the secondary type the prognosis is bad, when the ovarian tissue has been removed or destroyed.

In functional ovarian deficiency pregnancy has a definite therapeutic value. This is apparently due to the stimulation of the ovaries by the increased pituitary activity. This holds a hope that with more potent pituitary preparations the ovarian function may be so stimulated that the prolonged ovarian treatment now required may not be necessary.

I do not know of any class of patients suffering from headache and asthenopia who present a more difficult problem to the ophthalmologist than women who have been castrated. In many cases they seem unable to use their eyes with any degree of comfort for any purpose, particularly near work. They are excessively emotional and suffer as a result. In such cases it is important that the underlying cause of the symptoms be recognized and that an attempt be made to give them relief by the means above discussed. The ophthalmologists frequently see these patients because their ocular symptoms are those which give them the most discomfort.

#### OCULAR NEUROSES

Such neuroses are described in the text books variously as asthenopia of hypochondriac or neurasthenic origin; also as copiopia (nervous asthenopia), retinal hyperesthesia and painful accommodation. It would seem that these names refer to a clinical entity which we may recognize as having their origin in a functional or organic disturbance of the nervous system, which often presents asthenopia and headache as an outstanding symptom. Such cases have a definite pathological cause for their symptoms and should

not be dismissed as "neuro". They are the bane of the ophthalmologist, as well as in all other branches of medicine; but my experience has been that these cases carefully studied frequently can be helped. The terms applied in the text books are misleading; the ocular symptoms are a part of a disturbance of the nervous system and should be so recognized and the diagnosis sought for.

Many of them will be due to thyroid dysfunction, hypogonadism or other disturbances of the nervous system or of organic origin; as a result of shocks, and emotional disturbances due to financial and domestic difficulties and the like. They are difficult problems. They should, however, be retained under the care of the ophthalmologist. He should study these cases carefully, obtaining consultations if necessary to assist in the diagnosis, but it is unfair to the patients to refer them to the internist, the neurologist or the psychiatrist except for the diagnosis, etc. Careful earnest study will enable one to relieve most of these cases or to at least suggest a method of relief. The late Dr. George Derby, in a paper read before the Ophthalmological Section of the A. M. A. some years ago, agreed that it is best for the ophthalmologist to retain these patients, and to treat them, so far as possible, himself.

There are two forms of headache apparently of ocular origin which are of interest first, the starvation headache and secondly the autointoxication headache.

Starvation headaches may simulate very closely headaches due to eye strain. They are frequently encountered in those who are employed during the day, who are out a good deal at night, eat insufficient or no breakfast and rush off to work and have only a cold sandwich for lunch. In the afternoon they develop headaches, which appear to be due to the eyes. Examination of the eyes with a careful history of the case will yield the diagnosis and prevent error.

One should not prescribe glasses in these cases when it is food and sufficient rest that they require. The headaches and asthenopia

result from ocular neuromuscular asthenia due to insufficient nutrition and rest.

One sees many such cases in Washington among the departmental employees. Often they are young men and women coming from a rural section of the country or smaller towns who have not had the opportunity of a city life and are anxious to avail themselves of the educational opportunities or opportunities for pleasure.

#### AUTO-INTOXICATION

This diagnosis is purely empiric and results from clinical observation only. There are a number of officers of the army and navy stationed in Washington who are very vigorous men physically and who are accustomed to an active life in the out of doors. They are trained in their youth to be athletes and are required in the service to keep themselves physically fit. Upon being ordered to Washington for departmental duty there is an immediate transition from an active to a sedentary life of an office worker. They have vigorous appetites and are accustomed to amply satisfy them. After a few months they begin to develop moderate asthenopia and nagging headaches. One examines the eyes carefully and corrects the refractive error but the symptoms continue. One is dealing here with men who are required to have a physical examination each year and who are watched very carefully throughout the year. They usually perfect physical specimens.

The form of asthenopia from which they suffer is puzzling until one recognizes it. The diagnosis cannot be based upon laboratory findings but solely upon the intelligent history and experienced deductions that one may make. If one prescribes vigorous exercise daily and the lessening of the consumption of food, the symptoms very promptly disappear.

These two groups of cases, above described, are difficult to diagnose at first. After one's attention has been drawn to them they become easy of recognition. Sir William Arbuthnot Lane says that the eyes are always affected in intestinal stasis and

afford a delicate indication of the degree of auto-intoxication.

#### TROPICAL ASTHENOPIA

Attention by Elliott is given to tropical asthenopia from glare and other factors in the tropics such as poor food, isolation or malarial infections. Some years of service under the equator with our army causes me to endorse his views. Colonel Elliott describes the sunlight as a cause; it is undoubtedly a factor. I am inclined to believe that the reduced mental, physical and nervous tone are strong factors. These conditions are brought about by the lack of proper food, isolation, heat and in many instances by the lack of proper exercise incident to the high temperature and humidity.

#### ANISEKONIA

Differences in the size of the retinal images: Ames in his work on this subject has given us some very interesting findings. The ophthalmoeikonometer may prove to be of great value in the diagnosis and treatment of aniseikonia. It remains to be seen how practical this is clinically. We will probably be able to evaluate this better in the course of the next few years.

#### NEURALGIAS

One should not overlook the neuralgias, particularly a supraorbital, occipital, or trigeminal neuralgia as a complicating cause of headaches and ocular discomfort. The differential diagnosis is essential. A careful investigation of the case is not necessary in order to arrive at the proper diagnosis.

The subject of neuralgia is a difficult and extensive one, but one should bear in mind the possibility of neuralgia in obstinate cases of headache about the eyes or brought on by the use of the eyes, when the eyes are found to be not at fault.

The subject of headaches due to eyes has not been discussed in these remarks. It is a subject that has been so thoroughly studied that it would seem unnecessary for me to speak of it before a body of this sort.

In the conditions just described it is taken for granted of course that an exhaustive study conducted with meticulous care has been made of the ocular apparatus. It is, of

course, essential that we eliminate entirely the possibility of the eyes themselves being at fault, before we take up further considerations. This offers difficulties in many cases. To assure oneself without doubt that there is no fault in the ocular apparatus is not easy; particularly is this true in regard to the muscular imbalances.

#### DISCUSSION

Dr. Edley H. Jones, (Vicksburg): Dr. Davis has presented a timely paper in an excellent manner and I am sure I voice the opinion of all the members of this section when I say we appreciate his effort. In dealing with a subject so extensive the limitations of time and space preclude detailed discussion. The essayist makes it quite plain that the ophthalmologist should "follow up" his cases to a satisfactory conclusion and that he should, when indicated, refer them to internists, otolaryngologists, etc. In these broad principles I thoroughly concur.

The word asthenopia is derived from Greek roots, meaning "weak sight". Fuchs defines it as "a sense of weariness in the eyes and head, set up by the use of the eyes", and classifies the various types as accommodative, muscular, nervous, photogenous and reflex. To this classification I would add the toxic type, to include those cases resulting from the use of tobacco, alcohol, or exposure to carbon monoxide, etc. In my own experience, errors of refraction are by far the most frequent cause, followed in order of frequency by the reflex, the muscular, the toxic, the nervous and the photogenous types.

Since all the conditions that cause asthenopia may also cause headache, I shall follow the example of the essayist and discuss both together. As a matter of fact, when asthenopia becomes severe, it is accompanied by a headache. However, the reverse is not true and we must remember that headache is the most frequent of all symptoms.

In reviewing the literature pertaining to this subject, I noted that Auerbach presented a classification of headaches in 1912 and again in 1913. Later Behan, in his book on "Pain", included a table listing pathways from abdominal viscera to the cranial nerves, causing reflex headaches. In 1932 Eustis presented a classification based on regional anatomy. The bibliography on this subject is literally enormous!

In the differential diagnosis of headache, there are three points I have found of value, namely the time of onset, the location and the character of the pain.

If a patient gives a history of retiring, free of headache but awakening with one, errors of accommodation and muscular anomalies are elimin-



ated; it is obviously impossible for the eyes to become tired while sleeping.

Again, the location of the pain is of value, ocular headaches are usually frontal and accompanied by a sense of eye strain; there may be an aching of the ball; less often the headache is occipital. If there is a sense of pressure between the eyes, particularly when there is also temporal headache, I suspect some nasal condition, most often subacute ethmoiditis; patients with nasal congestion often complain of the glare. Occipital headache is frequently caused by involvement of the posterior sinuses; occasionally, it may be caused by infected tonsils. Pain at Sluder's point, radiating down the neck to the shoulder is diagnostic of sphenopalatine neuralgia. In my experience, vertical headache is due to only four conditions, constipation, hypertension, pelvic disease in women and syphilis. Headaches in other areas are usually reflex.

Lastly, the character of the pain is important. Errors of refraction and muscular anomalies may cause dull or even throbbing headaches, but the pain is *never* lancing.

Now let us consider the causes of headaches, as presented by the essayist. He has purposely omitted ocular causes and has listed chronic nephritis, vascular hypertension, aniline poisoning, food allergy, malaria, brain tumor, arteriosclerosis, hyper- and hypothyroidism, hypogonadism, neurones, starvation and autointoxication. All of these conditions may cause, or be accompanied by, asthenopia or headache, or both. So, also, may syphilis, tuberculosis, malignancies, pituitary or adrenal gland disease, brain abscess, types of nephritis other than chronic, pyelitis, cystitis, prostatitis, indigestion, constipation, foci of infections (of teeth, tonsils, gall bladder, etc. blood dyscrasias, contagious and infectious diseases and practically all other ills to which human flesh is heir. Since the essayist has stressed certain of these conditions, it is evident that he has had experience with them. However, the majority of such cases have suffered symptoms that have led them to consult a general physician prior to consulting an ophthalmologist. If they have not done so, and we find symptoms or signs that indicate the need of a general or special physical examination, it is our duty to refer them.

Incidentally, the essayist mentions "toxic putrefactive substances in the general circulation and the failure of the liver to synthesize them". I can find no reference in the literature to support this statement. Of course, there are toxic products in the circulation which are detoxified by the liver. I would be glad if the essayist would elaborate on this point.

Since I have been quite interested in allergy, I cannot omit migraine without discussion. For

years it has been treated as a clinical entity but such a large percentage of sufferers of hereditary migraine have been relieved by allergic methods that many observers, including the essayist, now consider it as a symptom.

There are two toxic and one physical condition mentioned by the essayist that I would like to emphasize.

Tobacco unquestionably is of importance, though I doubt the *modus operandi* suggested. I believe it acts as a toxic agent. For experimental and clinical evidence to support this opinion I refer you to Maddock and Collier's recent article, reporting their very interesting experiments. In 10 habitual cigarette smokers, the act elevated the systolic blood pressure 8 to 20 mm. of mercury and likewise the diastolic blood pressure 0 to 25 mm., increased the pulse rate 8 to 38 beats per minute and decreased the skin temperature in toes and fingers 1 to 6 degrees C. From 10 to 70 minutes were required to return to normal.

The alcohols are also toxic agents of importance. Lack of time prohibits any discussion of them.

Carbon monoxide is very important. On examining my records I find that laboratory technicians have suffered with asthenopia and headache from this cause, more often than any other class. Cooks and housewives may have a leaky heater or stove and are occasionally affected.

Lastly, the question of proper lighting is most important, particularly to school children. The power and light companies recently put on a campaign for better lighting that was of some value, though patients often selected lights too brilliant. We must remember that light may be excessive as well as insufficient.

In conclusion, I wish again to congratulate the essayist on his exhaustive and highly interesting paper.

Dr. H. L. Arnold, (Meridian): This is one of the most practical and stimulating papers to which I have ever had the pleasure to listen. The subject of headaches is of interest to all branches of medicine. To us it is a symptom, but to the patient it is often a disease. I am sorry that his paper could not have been heard by all of the other sections. We, as ophthalmologists, have been prone to consider our work as something apart from that of the general practitioner, and the general practitioners have been too apt to consider an eye examination of no value to them. Dr. Davis has well brought out many of the conditions in which team work by the ophthalmologists and internists is necessary. The dissatisfied, complaining patient is never a pleasant patient with whom to work, but he is mentally or physically sick, and the greatest mistake that we make is to dismiss him as a neurasthenic. It has long been my opinion that very few patients are entitled to be called



neurasthenics. If the oculists and internists were more diligent and thorough in their examinations of these patients, they would usually find some underlying cause for the condition so often called neurasthenia. As Lagrange said of glaucoma, "it is a sick eye in a sick body", so in many other conditions, could the same be said.

Thyroid disfunction is especially prone to cause persistent symptoms of eye strain, no matter how well corrected the errors of refraction may be. It has become my habit to have a basal metabolism test made in all suspicious cases.

Dr. Davis' remarks about the difficulty in refracting the arterio-sclerotic patients were very interesting to me, as I have often found the same trouble in getting them to distinguish between test lenses of different strengths.

### THE PROSTATE AND SEMINAL VESICLES AS A FOCUS\*

EUGENE B. VICKERY, M. D.†

NEW ORLEANS

Study of a large series of cases shows that approximately 75 per cent of prostatic and seminal vesicular infections give a history of previous urethritis, of which the majority are, of course, of gonococcal etiology. However, observations, from time to time, of the bacterial flora of the prostate and seminal vesicles becoming infected during the course of a specific urethritis, shows that a change in the type of organism present takes place fairly early in the course of the disease, and in most cases, not a great many months elapse before the gonococcal infection is replaced by a non-specific infection.

The origin of cases of prostatitis and vesiculitis without a precedent history of urethritis seems best explained as a focal affair. In addition, many of those with a previous record of specific infection may easily have a focus elsewhere in the body as the cause of the primary infection of the genital tract, or the flare-up of an old infection. So much does this fact impress us that, in all cases not directly associated with a specific urethritis, in addition to our local treatment, we investigate the teeth and upper respiratory tract for foci, advising the eradication of any focal infection found.

Investigation of the bacteriology of prostatitis and vesiculitis, which is not of specific etiology, shows a much higher incidence of bacilli than we find in the tooth and upper respiratory tract infections, so that we feel that prostatitis and vesiculitis are not as likely to be the cause of a focal affair as infection in the previously mentioned locations. However, in fully 50 per cent of these non-specific infections of prostate and vesicles, we are able to demonstrate streptococci or staphylococci, either in pure culture or in a mixed infection, so that in all conditions which may be attributable to focal infection, we feel that the urinary tract should be thoroughly investigated as a possible focus.

In searching for a focus in the genital tract we must remember that a large percentage of infections here are present without any symptoms, and statistics show that in cases of chronic prostatitis and vesiculitis, fully 85 per cent will, on urinalysis, show either no pus or a negligible amount of it. Examination by rectal palpation is often misleading, as a small, apparently innocent prostate frequently harbors a marked infection. So the only conclusive evidence depends on what the secretion, expressed by massage of the prostate and stripping of the vesicles, shows. The prostatic secretion may be obtained with the vesicular content, or they may be examined separately. While the infection is predominant in one or the other, there is usually some trouble in both if it shows in either place. It is most important to call attention to the fact that we often find no pus, or a negligible amount of it in the material expressed on one examination, and it is necessary to try the provocative test. A provocative test is satisfactorily obtained by massage on three successive days, or at 48-hour intervals, and where trouble is suspected we cannot be reasonably sure it is not present unless the provocative test is carried out. The secretion from the prostate and vesicles should be stained and examined for bacteria, as well as pus. In a few instances we are able to demonstrate a definite bacterial prostatitis where we find only a rare

\*Read before the Orleans Parish Medical Society, March 25, 1935.

pus cell. What significance this bacterial prostatitis may have we are unable to say, but it seems that a condition of recognized focal etiology should have a therapeutic test if it is found.

Some of the clinical entities in which we have observed improvement under treatment of prostatic and vesicular infection are (1) Arthritis, (2) Neuritis including sciatica, (3) Fibrositis, (4) Erythema multiforme and several of the infectious skin diseases, (5) Certain inflammatory diseases of the eyes. Pains in the lower abdomen, back and thighs are, we feel, directly attributable to the infection, particularly vesiculitis, and relief of these symptoms is not credited to the clearing up of the focus.

Treatment of prostatitis or vesiculitis, or both, is carried out conservatively by massage of the prostate and stripping of the vesicles two or three times weekly. Enduring results may be obtained in the majority of cases, but the problem of eradication of the infection here is not so simple as in the teeth and tonsils, so we have a fair percentage of recurrences just as we encounter in sinus infections. The average time required for clearing up the infection is three to six months, some shorter, some longer. However, if we do not get improvement in the focal condition within six or eight weeks, we are not likely to obtain it. In addition to massage and stripping of the vesicles, we may employ non-specific protein and autogenous vaccine with benefit in an occasional case. The use of measures to increase the local temperature is sometimes used, but is usually disappointing in results obtained. Fever therapy is being tried out and may promise a great deal. Urinary antiseptics may be employed but seldom seem to give any lasting benefit. Various intravenous dyes have been used without any remarkable results. Salvarsan, intravenously, is often of benefit, and in stubborn cases we feel the risk is justified. Injection of mercurochrome directly into the prostate, with a needle through the perineum has been found to be of great help by Grant, but as yet his work is unconfirmed. Injection of the vesicles with va-

rious antiseptic solutions through the vas or rectum has been carried out with indifferent results. A complete radical removal of the prostate for focal infection is unusually difficult technically, and the risk is too great to justify it in the light of our present knowledge, and the same facts are even more true of surgical removal of the seminal vesicles. However, much can sometimes be accomplished transurethrally by opening up dilated prostatic ducts and pockets or diverticulæ in the prostate, giving adequate drainage to infection partially sealed off.

In conclusion, attention is again called to the importance of the eradication of other foci in the treatment of any non-specific infection of the genital tract.

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#### REPORT OF THE PASTEUR INSTITUTE OF THE CHARITY HOSPITAL OF NEW ORLEANS FOR THE YEAR 1934

RIGNEY D'AUNOY, M. D.†

and

JOHN H. CONNELL, M. D.†

NEW ORLEANS

During the year 1934, the Pasteur Institute of the Charity Hospital administered antirabic prophylactic treatment with material prepared as generally indicated by Semple\*. Each injection consisted of a 2 mil portion of 4 per cent killed virus-emulsion, except in the case of children under three years of age, to whom a 1 mil portion of vaccine was injected at each treatment.

#### INJURIES BY PROVEN RABID ANIMALS

*Head Injuries:* Injections were made twice daily for the first seven days, and once daily thereafter for fourteen days.

*Injuries to Trunk and Extremities:* If multiple and severe, the same treatment was used as for head injuries.

If slight and treatment was begun within six

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†From the Departments of Pathology and Bacteriology of the Louisiana State University Medical Center and the Charity Hospital, New Orleans.

\*For the method of production of virus, see Reports of the Pasteur Institute for 1931-32. *New Orleans Medical and Surgical Journal*, 86:236-238, 1933.

days after injury, treatments were continued for fifteen days, with one injection daily.

If slight, and treatment was begun more than six days after injury, treatments were continued for eighteen days, with one injection daily.

#### INJURIES BY UNLOCATED ANIMALS

If the injury was received under suspicious circumstances, the same type of treatment was used for a similar type of injury by proven rabid animals. If there were no suspicious circumstances, treatment was given over a period of fourteen days, with one injection daily.

#### NO ACTUAL INJURY

If rabid or suspected animals had been handled, treatment was given over a period of eighteen days, with one injection daily.

#### TREATED CASES

Two hundred and twenty-one cases were treated during 1934. They are classified as follows, according to the suggestion of the International Rabies Conference of the League of

Nations, in order that the statistics of various institutions may be compared.

A. Cases in which the animal proved to be rabid (by microscopic and biologic test).

B. Cases in which the animal was diagnosed clinically as rabid.

C. Cases in which the animal was only suspected to be rabid (stray, destroyed, or in such a condition when received that the brain was unfit for examination).

D. Cases in which the animal was alive and well after an observation period of three weeks, or whose brain was found to be negative when examined after the observation period.

E. Cases in which the patients received treatment without actually having been bitten (patients who handles rabid or suspected animals).

Table I records the number of treated cases in each category and classifies the types of injury.

TABLE I

LOCATION OF INJURY	CATEGORY 1934					
	A	B	C	D	E	Total
Head .....	6		12	1	1	20
Body .....	1		5	1		7
Superior Extremities .....	37	2	45	2	40	126
Inferior Extremities .....	15	1	38			54
Multiple sites .....	3		10			13
Total .....	62	3	110	4	41	220

Table II indicates the ages of the treated patients.

TABLE II

AGE	WHITE		COLORED		Total
	Male	Female	Male	Female	
Under 1 year					
1- 2 years	2	2			4
3- 4 "	9	4	1	1	15
5- 9 "	22	16	1	2	41
10-19 "	33	12	4	2	51
20-29 "	25	7	5	1	38
30-39 "	17	9	1	2	29
40-49 "	14	8	2	2	26
50-59 "	8	2		2	12
60-69 "	1	1	1		3
70-79 "		1			1
80 yrs. and over					
Total	131	62	15	12	220

Table III records the geographical distribution of the patients of Louisiana.

TABLE III

Ascension .....	1
Assumption .....	1
Avoyelles .....	3
Concordia .....	2
East Baton Rouge .....	2
Evangeline .....	2
Iberville .....	3
Jefferson .....	71
La Fourche .....	3
Lincoln .....	1
Orleans .....	86
Plaquemine .....	1
Pointe Coupee .....	7
Richland .....	1

St. Charles .....	2
St. Helena .....	2
St. John the Baptist .....	11
St. Landry .....	1
St. Tammany .....	11
Tangipahoa .....	3
Terrebonne .....	2
West Baton Rouge .....	4
Total .....	220

Table IV gives the number of days elapsing between the time of injury or exposure and the beginning of treatment, when such information could be obtained.

TABLE IV

DAYS	PATIENTS
1	73
2	31
3	15
4	14
5	9
6	5
7	6
8	7
9	2
10	7
11	2
12	
13	
14	
15	1
16	3
17	1
18	1
19	
20	1
21	1
22	1
23	
24	
25	1
Over 25 days	4
Total	185

Thirty-five patients merely handled the dog.

Table V indicates the circumstances of the injury and the type of first aid treatment given in each case.

TABLE V

Injury inflicted through clothing .....	43
Injury inflicted to bare skin .....	177
Iodine applied to site of injury .....	4
No local treatment .....	97
Phenol, cauterization and serum .....	66
Tetanus antitoxin only .....	92

Table VI indicates the number of dog brains examined and their diagnosis.

TABLE VI

Negative .....	151
Positive .....	39
Unsatisfactory .....	13
Total .....	203

## THE PERFORATED APPENDIX

F. CREIGHTON SHUTE, JR., M. D.  
NEW ORLEANS

Appendicitis as a surgical entity was first described by Fitz, an internist, nearly fifty years ago, and shortly afterwards, Morton first deliberately operated for it. Since that time, thousands of papers have been written on the subject and today there seems to be a widespread opinion among physicians that the problems connected with the treatment of appendicitis are solved. That this attitude is not justifiable is shown by the mortality rates throughout the country, being little better than they were twenty-five or thirty years ago. Surgical removal of an uncompleted acute appendix is, in most cases, attended by excellent results, but when perforation has occurred and the process has spread beyond the confines of the appendix, dangerous complications are encountered, and it is with these late cases that this report is concerned.

On entering Charity Hospital of Louisiana as an interne in 1929, after having been taught that the conservative treatment, with probable deferred operation, was the way to handle a ruptured appendix with diffuse or spreading peritonitis, I was amazed to find that all these cases were being treated by immediate operation with cecostomy. I was told of the wonderful results obtained by this method, and that the conservative treatment might be proper for some cases; but how could you differentiate



these cases? Becoming convinced, I watched cecostomies done with apparently good results, and later, when on the House Staff, began doing them myself, firmly believing this a life-saving procedure. Since the argument for and against this method has been revived recently, I decided to review my own cases of the past two years.

This series consists of 145 cases of perforated appendicitis with varying degrees of peritonitis, 117 of which had cecostomies and 28, immediate operation but no cecostomy. The patients were of all ages, the youngest being four years of age and the oldest sixty-four. The majority, however, were between the extremes of life, or between ten and forty years of age. The duration of the attack of appendicitis was in most cases three to five days, the shortest being one day and the longest, thirty days.

It would be of small value to rehearse in detail the statistics of symptoms and signs, temperatures, blood counts, or urinalyses, for there is nothing characteristic or unusual about them. There are, however, two very striking facts which impress with their importance in this group of cases. The first is that there were a number of cases presenting generalized abdominal pain with no localization, which went undiagnosed by physicians, and operation was delayed until perforation had occurred and peritonitis was obvious. This is particularly true of the pelvic appendix and illustrates the importance of rectal examination, for, I believe, had this been done, certainly the diagnosis in most of these cases would have been made. Two of these cases were even admitted to the medical service of the hospital and treated for gastro-enteritis, and it was not until later that the true nature of the case was realized. The second, again no new consideration, but astounding after all that has been said and written about it, is the number of these patients given purgatives at the onset of their illness. Sixty-nine of these 145 cases took purgatives, or 48 per cent, a figure which, no doubt, would have been materially increased had the histories been taken more carefully or transcribed more accurately.

The first group of cases for consideration consists of those having immediate operations, with removal of the appendix and cecostomy performed. Cecostomy was first suggested by Mixer in 1895, advocated by Graves in 1909, Jackson in 1917, Brussock in 1925, and has been in vogue at Charity Hospital of Louisiana from 1926 to date. The technic employed in this series consists of the introduction of a Pezza catheter into the cecum, through the appendiceal stump, and held in place by two concentric purse string sutures. This tube was brought out the original incision, in those of the McBurney approach, and through a stab wound in the right lower quadrant where the right rectus incision was employed.

In classifying these cases, we find that they fall into three groups: those with diffuse peritonitis, (40 cases with nine deaths, or a mortality of 22.5 per cent); those with localized peritonitis, (fifty-three cases with eight deaths, a mortality of 15.38 per cent), and those with early abscess formation, (twenty-four cases with four deaths, a mortality of 16.66 per cent). The total number of cases then is 117 with twenty-one deaths, or a mortality of 17.94 per cent.

TABLE I  
SUMMARY OF GENERAL MORTALITY WITH  
CECOSTOMY

TYPES	No. of Cases	Deaths	Per Cent
Diffuse peritonitis	40	9	22.5
Localized peritonitis	53	8	15.38
Early abscess formation	24	4	16.66
TOTAL	117	21	17.94

In considering the question of drainage, we find in the cases of diffuse peritonitis that were drained, the mortality was 24.2 per cent, while in those not drained it was 14.4 per cent. In those with localized peritonitis, the mortality with drainage was 17.1 per cent, without, 11.1 per cent; and in those with early abscess formation, drainage 10 per cent, non-drainage, 50 per cent. The latter figure is of no value, however, as there were only four cases, with two deaths. The total number of cases drained was eighty-eight, with sixteen deaths, or 18.1 per cent mortality. Those without drainage were twenty-nine, with five deaths, or 17.2 per cent mortality. There being no marked difference

in the mortality rates of the two series, we can hardly draw any conclusions as to drainage.

The question of the incision is worthy of consideration here, for we find the mortalities to be for the right rectus 33.3 per cent in the diffuse peritonitis group, 30 per cent in that of the localized peritonitis, and 33.3 per cent in those of early abscess formations, while for the McBurney incisions, we find the mortality rates to be 16 per cent, 6 per cent, and 6.6 per cent, respectively. The total number of cases in which right rectus incisions were used was forty-four, with fourteen deaths, or a mortality rate of 31.8 per cent, while in seventy-three cases with McBurney incisions, there were seven deaths, a mortality rate of 9.5 per cent. Granting the disadvantage of less exposure through the McBurney incision, it seems that an incision in this area, as large as possible, without

cutting muscle tissue, should afford an adequate exposure for the performance of the task, with avoidance of trauma, to any dexterous surgeon. The obvious advantage of such an incision are: First, that the work is confined to the immediate area of the pathology, with less disturbance of the general abdominal cavity, and spread of the infection. Second, most of these wounds become infected and it seems that a small McBurney infection is preferable to a large infected wound involving the rectus sheath where evisceration is more apt to occur and the possibility of rupture into the peritoneal cavity more likely.

The type of anesthetic has no bearing, since in the majority of these cases spinal analgesia was used. Only six were operated on under ether, and one under ethylene.

TABLE II.  
SUMMARY IN REGARD TO DRAINAGE, TYPE INCISION, AND ANESTHETIC

	DIFFUSE PERITONITIS (40 Cases)			LOCAL PERITONITIS (53 Cases)			EARLY ABSCESS (24 Cases)			TOTAL		
	Cases	Deaths	Per Cent	Cases	Deaths	Per Cent	Cases	Deaths	Per Cent	Cases	Deaths	Per Cent
With drainage	33	8	24.2	35	6	17.1	20	2	10	88	16	18.1
Without drainage	7	1	14.4	18	2	11.1	4	2	50	29	5	17.2
Rt. Rectus incision	15	5	33.3	20	6	30	9	3	33.3	44	14	31.8
McBurney incision	25	4	16	33	2	6	15	1	6.6	73	7	9.5
Spinal analgesia	36	7	19.4	51	8	15.6	23	4	17.3	110	19	17.2
Ether	3	2	66.6	2	0	0	1	0	0	6	2	33.3
Ethylene	1	0	0	0	0	0	0	0	0	1	0	0

The routine procedure employed in the post-operative treatment of these cases conforms essentially with the measures suggested by A. J. Ochsner, in 1902, for cases of peritonitis. They were placed in the Fowler's position, had nothing by mouth, fluids—three to four liters per day parenterally, a heat tent over the abdomen, liberal doses of morphine, and gastric lavages or stomach drainage through a Jutte tube as indicated. In the past year, after the work of Alton Ochsner and I. M. Gage on adynamic ileus, more attention was devoted to blood chlorides and ileus. All dextrose solutions given intravenously were fortified with insulin, and "hypertonic" Hartmann's solution was administered intravenously in combatting ileus, as advocated by these men. Frequent careful examinations were made, and as complications ensued, they

were treated as soon as recognized. When the peritonitis began to subside, and the patient seemed well on the road to recovery, the cecostomy tube was removed. This occurred from four to seventeen days post-operatively, the average being eight days. The cecostomy wounds healed in varying lengths of time, the shortest being five days, the longest seventy-seven days, and the average fourteen to twenty-one days. In two cases, secondary closures of the fecal fistulae were necessary.

The complications in these cases included:

1. Cul-de-sac infections ..... 10
2. Sub-diaphragmatic infections ..... 6
3. Broncho-pneumonia ..... 4
4. Abscess of right lumbar region ..... 1
5. Pyelo-cystitis ..... 1

Of the forty-four cases having rectus incisions, eleven had severe wound infections, thereby giving us two infected wounds instead of one, as in the McBurney incision cases. In one of these patients, the infection spread along the fascia of the entire abdomen and lumbar regions, being the cause of death. Of the cul-de-sac infections, two went on to suppuration and were incised and drained, as were two of the sub-phrenic infections. One sub-phrenic infection went unrecognized, ruptured into the lung, and caused a pneumonitis with subsequent lung abscess.

In reviewing the causes of death in the twenty-one fatalities in this group, we find thirteen died of peritonitis alone, as far as could be determined, since post-mortems were not obtained in all cases. Two died of pulmonary embolism with multiple infarcts of the lung, revealed at autopsy. In three cases, death was attributed to post-operative shock, since two lived only one day, and one, six hours, following operation. Two cases died of peritonitis associated with broncho-pneumonia, and one died of extensive wound infection, with septicemia, autopsy revealing no peritonitis.

The second group of cases consists of twenty-eight, in which the immediate operation was done without cecostomy. These cases differ from the first group in that there were no cases of diffuse peritonitis, because all such cases have been treated by operation with cecostomy, and here, also, we have cases of late abscess formation, in which the procedure was incision and drainage without attempt at removal of the appendix.

These cases fall into three groups: rupture with localized peritonitis, (nineteen cases with four deaths, or a mortality rate of 21 per cent), two cases of early abscess formation with no deaths, and seven cases of walled off abscesses, with no deaths.

The questions of drainage and type of incision are valueless here, as the only cases drained were those of late abscess formation, and practically all the cases were done through McBurney incisions. Our only comparison of the cases with and without cecostomy, is in the group of perforations with localized peritonitis.

Of those with cecostomy, there were eight deaths in fifty-three cases, or a mortality rate of 15.38 per cent, while in the group without cecostomy, there were three deaths in nineteen cases, or a death rate of 15.7 per cent. The mortality figures, therefore, are practically the same, but in reviewing the causes of death, we find that of the three without cecostomy, one died of pneumonia, autopsy revealing no peritonitis, the second died of peritonitis associated with broncho-pneumonia, and the third died of infarct of the ileum with ileus, autopsy here showing no peritonitis. Of the eight deaths in the group with cecostomy, six died of peritonitis alone, one with broncho-pneumonia, and peritonitis, and one of extensive wound infection with septicemia.

The one death in the group with early abscess formation was due to pyelophlebitis of portal and mesenteric veins with multiple abscesses of the liver and septic infarcts of the lungs.

The complications in this second series of cases were none other than those already mentioned as the causes of death.

TABLE III  
SUMMARY OF GENERAL MORTALITY  
WITHOUT CECOSTOMY

TYPE	Cases	Deaths	Per Cent
Localized peritonitis	19	3	15.7
Early abscess formation	3	1	33.3
Late abscess formation	7	0	0
TOTAL	28	4	14.2

This would lead us to believe that the mortality rate is actually higher with cecostomy in cases of ruptured appendicitis with localized peritonitis. Certainly in this type of case the procedure seems to be of no value. It is generally agreed that the cases with abscess formation should have an incision and drainage only, so this leaves for consideration the value of cecostomy in the group with diffuse peritonitis.

Only recently, have I employed the conservative treatment with deferred operation, therefore, I am unable to present a personal series of these cases, and must review the literature for statistics on this method.

A. J. Ochsner, thirty years ago, advised against immediate appendectomy when generalized peritonitis was present, and suggested a form of conservative treatment, known today by his name. This treatment was based upon

the principle that the peritoneum provided its own protective mechanism, capable of walling off or taking care of the infection, provided the patient and his gastro-intestinal tract were kept at rest, and spared the trauma of a laparotomy. He, and his followers, have not convinced the majority of "appendectomists" in thirty years, regardless of his sound principle and the vast amount of literature reporting low, almost unbelievable mortality rates, in these cases.

Outstanding among these reports is one by Deaver and Magoun, of 5,488 cases of appendicitis at Lankenau Hospital of Philadelphia. From 1901-1905, there were 1,358 operations with 143 deaths, a general mortality rate of 10.5 per cent. All these cases were operated on immediately, regardless of the extent of the process. From 1905-1910, some cases with rupture and diffuse peritonitis were treated conservatively, with a reduction of the mortality rate to 5.6 per cent in 1,159 cases. In 1910, this treatment was instituted in all cases of diffuse peritonitis, and in the next five year period the general mortality rate was 3.7 per cent.

Potter and Collier reported in 1933 that at the university hospital of Michigan, from 1925-1930, the mortality rate in late appendicitis with generalized peritonitis was 52 per cent. Since that time the conservative treatment has been instituted, with a reduction in the mortality rate to 8.1 per cent.

LeGrand Guerry reports a series of 123 cases of diffuse peritonitis treated conservatively, with delayed operation, with only two deaths, or a mortality rate of 1.6 per cent. Love found the mortality in three London hospitals to be 3.8 per cent when conservative treatment was adopted, but more than twice as great when immediate operation was done.

These results are very convincing and lead us to believe that the conservative plan of treatment in diffuse peritonitis is far superior to any form of immediate operative procedure, for the mortality rates of various writers throughout the country are from 15 per cent to 50 per cent in these operative cases. Granting that cecostomy may be of some value in such cases, for I believe that drainage of an edematous, gangrenous cecum as the contents of the small intestine are poured in is beneficial, the plan of treatment cannot compare with conservatism and these cases should not be operated on. In the case of early rupture, early abscess, or localized peritonitis, cecostomy seems to be of no value, as shown by this group of cases, and theoretically, if ileus exists, there will be no drainage, and if ileus does not exist, the cecostomy is unnecessary.

#### CONCLUSIONS

1. The matter of purgation at the onset of acute appendicitis is still a serious problem.
2. The McBurney incision is the approach of choice in operation for removal of the ruptured appendix.
3. Cecostomy is an unnecessary and probably unwarranted procedure in most cases of peritonitis.
4. The judicious use of the conservative treatment in diffuse appendiceal peritonitis is a sound surgical procedure, and may be regarded as the proper method to reduce the present high death rate from this disease.

#### BIBLIOGRAPHY

- Jackson, R. H.: *Amer. Jour. Surg.* 31:121, 1917.  
 Ochsner, Alton, and Gage, I. M.: *Amer. Jour. Surg.* 20:378-404, 1933.  
 Ochsner, A. J.: *Amer. Jour. Surg. & Gyn.* 15:34, 1902.  
 Deaver, J. B. and Magoun, J. A. H.: *Ann. Surg.*, 79: 854-861, 1924.  
 Potter, E. B., and Collier, F. A.: *J. Mich. State Med. Soc.*, 32:573-576, 1933.  
 Love, R. J.: *Lancet*, 1:375-381, 1929.  
 Guerry, LeGrand: *Ann. Surg.*, 84:283-287, 1926.



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### POLIOMYELITIS

The recent epidemic of poliomyelitis in the South and East has again attracted the attention of the profession to this dreaded crippling disease. In Tennessee, North Carolina and other states, the disease has reached epidemic proportions. In North Carolina since January 1 up to July 6, 312 cases of infantile

paralysis were reported, the epidemic being spread over 61 of 100 counties.

Intensive work has been conducted in the attempt to prepare an anti-poliomyelitis vaccine. Monkeys are being used and sacrificed in tremendous numbers in order to hurry such experimental work. The cords of the monkeys are used in the preparation of the vaccine, both by the Kolmer and the Park-Brodie method. Using such vaccine, immunity against the disease has been produced experimentally in animals for more than two years. It is hoped that the immunity thus conferred may be as lasting as that following the recovery from poliomyelitis.

The vaccine is still in the experimental stage, although considerable quantities have been used in the epidemic areas. The problem is still unsolved and the efficacy of the vaccine must still be proven. However, progress to date is very encouraging and there is new hope for the control and eradication of poliomyelitis.

### SURGICAL CHIEF

Dr. Isidore Cohn was recently named Chief of the Department of Surgery at Touro Infirmary, New Orleans, to succeed Dr. Rudolph Matas who resigned from that office July 14, 1935.

The retiring Chief of Surgery at Touro, Dr. Rudolph Matas, has been in almost daily attendance at Touro since 1895, and has been Chief of Surgery since 1904. His resignation, because of his desire to devote more of his time to other activities, particularly his writings, is noted with extreme regret. Few physicians reach the international eminence attained by Dr. Matas, and very few indeed enjoy the same degree of respect and reverence of the entire medical profession. Beloved as a physician, teacher, scholar and gentleman, his achievements are entirely too numerous to be enumerated here. He has been named Honorary Chief of the Department of Surgery.

Dr. Isidore Cohn served two years of internship at Touro Infirmary from 1907 to 1909,

and then rose through successive ranks in the surgical service until he became Senior Associate in the Department of Surgery. Since 1932 he has been Chief of the Department of Surgery in the Tulane Post-Graduate School.

A student of Dr. Matas, a surgeon of prominence and importance in his particular field, he should be well qualified to carry on the exacting example set by his chief. We congratulate Dr. Cohn and wish him well.

## HOSPITAL STAFF TRANSACTIONS

### J. T. NIX CLINIC NEW ORLEANS

At a meeting held in August, Dr. L. A. Fortier and Dr. T. T. Gately presented the following paper.

#### FLAT PLATES OF THE ABDOMEN IN THE DIAGNOSIS OF ACUTE ABDOMINAL CONDITIONS

The use of flat plates of the abdomen in the diagnosis of abdominal conditions constitutes a valuable aid to the surgeon. There is little or no discomfort to the patient with careful and painstaking technic, and little time is lost. In the moderately ill patient, two views are made, an antero-posterior with the Bucky diaphragm, the patient recumbent; and an antero-posterior view with the patient sitting erect. If the patient is too ill for the effort of sitting erect, an antero-posterior view with the patient lying on either side is made.

The value of this procedure lies in the fact that normally there is little or no gas present in the small intestine. With the onset of intestinal obstruction anywhere along the tract, gas accumulates in the small bowel and the distended loops are readily recognizable. The absence of haustral markings and the peculiar "step ladder" effect will serve to identify the gas shadows as those of the small bowel. As the obstruction proceeds, accumulation of fluid in the bowel may be demonstrated in the sitting up position or in the antero-posterior lateral recumbent position by the characteristic fluid levels.

A word of caution is here necessary. In many cases of renal colic, a considerable amount of gas accumulates in the small and large bowel and may confuse the inexperienced. Attention to the clinical side of the case and comparison of the films with those of known cases of obstruction will aid in the differentiation.

If the condition of the patient justifies it, that is, if it is felt the obstruction may be partial and time is not a factor, the ingestion of a small amount of opaque media and the following of it over a period of hours may demonstrate the location of the lesion. Usually however, this is not desirable or necessary except when there is strong clinical evidence that the obstruction is only partial. Given a case with characteristic shadows of gas in the small bowel, distention, fluid levels, et cetera, the question may arise as to whether this

is a mechanical obstruction or an ileus. We do not believe it is possible to differentiate the two conditions from a study of the roentgenograms alone. Surgical judgment, experience and close study of the clinical findings must be relied on for this feature, and it is by no means easy, even for the greatest clinicians.

Another important application of flat plates of the abdomen lies in the perforation of hollow viscera either from ulcerative conditions or from trauma. The same series of plates are taken, antero-posterior view recumbent and an antero-posterior view erect, or in the case of desperately ill patients antero-posterior view recumbent and an antero-posterior view with the patient lying on either side. In cases of intestinal or hollow viscus perforation, gas may be demonstrated under the diaphragm in the erect position or lying under the lateral abdominal wall in the antero-posterior plates made with the patient lying on the side. In the latter plates, the gas may be seen as small triangular areas of decreased densities lying between the folds of the intestines and the lateral abdominal wall. These triangular areas of gas are important as they are seen early after the perforation when only a small amount of gas has escaped from the viscus.

Our first experience with these triangular shadows was in a child who had fallen on an iron picket fence with a wound of the buttocks. The gas shadows were demonstrated a few hours after the injury and the operation revealed a perforation of the sigmoid.

#### SUMMARY

1. Flat plates of the abdomen are extremely valuable in determining the presence of abdominal obstruction or perforation of a hollow viscus.

2. There is little time lost and little discomfort to the patient, and the findings are frequently sufficient to decide the subsequent management of the case.

### THE OSCAR ALLEN TUMOR CLINIC CHARITY HOSPITAL NEW ORLEANS

At the scientific meeting in August, Dr. James T. Nix, Director, presented the following paper.

#### REVIEW OF WORK OF THE FIRST TWO YEARS OF OPERATION

The Tumor Clinic at Charity Hospital, New Or-

leans, Louisiana, inaugurated its work on September 8, 1933. On October 26, 1933, by unanimous vote of the Board of Administrators of the Charity Hospital, it was officially named the Oscar Allen Tumor Clinic. Its services are offered to the indigent poor of the State of Louisiana. The present paper is intended to record its inception and the work accomplished during the first two years of its operation.

#### TUMOR CLINIC NEEDED

The rising mortality rate, the apparent increase in its prevalence and the lack of a specific curative measure place cancer in the rank of a major public health problem and have caused the mobilization of medical institutions the world over. Cancer control, because of the multiplicity of disease processes placed under a single name, presents many phases. The first, of course, is the acquisition of new knowledge, for the fundamental phenomena of the genesis and nature of tumors still are shrouded in mystery. Because of the great complexity of such research, it must be left to the ingenuity of experts working in the large cancer foundations. The second phase consists in the dissemination of knowledge already attained. This is considerable and sufficient for all practical purposes, since it affords means of identifying neoplastic growths and adequate methods for curing them provided they come to the therapists reasonably early in their development. The third phase is the provision of therapeutic institutions where all the advantages of our modern knowledge will be available. The Committee on the Treatment of Malignant Diseases of the American College of Surgeons has done much to foster the creation of units devoted to this purpose in general hospitals and is convinced that "while awaiting future discovery of more efficient methods of treatment of the disease, it is possible effectively to reduce the suffering and mortality from cancer by an organized application of the knowledge that already is available." With these views in mind the Oscar Allen Tumor Clinic was organized.

As has been pointed out by Ewing and Greenough, who formed part of a special committee appointed by the American Society for the Control of Cancer, the most satisfactory work in the treatment of cancer has long been accomplished by specialists working in comparatively narrow fields, such as brain tumors, uterine cancer and mammary cancer. The introduction of radiation has changed "the field of therapeutics from a comparatively simple series of standard operations into a highly complex question of choice, involving deliberate conference between surgeon, radiologist and pathologist." Because the experience of any one man does not suffice in guiding the treatment of different types of malignancy, the knowledge of several specialists is pooled in the Tumor Clinic, where the entire staff views each case.

#### MEDICAL STAFF

The Director was entrusted with the development and organization of the new unit in the summer of 1933 and has been in charge to the time of this report. The following physicians have been associated with him: Doctors Emmerich von Haam and John H. Connell, pathologists; Doctor John Miles, radiotherapist; Doctor James K. Howles, dermatologist; Doctor R. Kampmeier, internist; Doctor D. Young, gynecologist; Doctor A. Culpepper, assistant surgeon, and Doctor M. Garcia, clinical assistant. Doctors Culpepper and Young withdrew after a few months. Doctors C. E. Gorman, surgical assistant; Doctor F. George, gynecologist and Doctor B. Salatch, dental surgeon, have joined the staff in the past year.

#### CLINIC ROUTINE

Though reference of patients to the Clinic from other departments is voluntary, the Tumor Clinic Staff gratefully acknowledges consultations from nearly every service and clinic at the Hospital.

The Clinic has made complete studies of cases referred. A history and physical examination are taken, emphasizing significant possible etiologic factors. Specifically these are trauma, chronic irritation, previous pathology in the area involved and heredity. Other points, of course, are investigated depending on the nature of the growth. Whenever the lesion is visible, a diagram is drawn to scale, recording as accurately as possible its dimensions and shape. This serves as a means of checking the progress of the lesion with precision, and as a guide to the distribution of interstitial foci of radiation. A photograph is also obtained. The diagram, which is made on special printed forms, and the photographs, are repeated whenever subsequent changes would indicate their usefulness. Unless there are contraindications, a biopsy of the tumor is performed. Whatever other laboratory tests and roentgenograms are needed are also obtained. The patients return on conference day and the entire findings and reports are submitted to the consideration of the Staff.

#### CONFERENCES

Patients are admitted to the Clinic on Tuesday and Thursday afternoons and conferences are held on Fridays. At these weekly conferences, the new patients admitted during the week are reviewed and freely discussed by representatives of nearly every specialty of medicine. A plan of treatment is dictated and recommendations are sent to the service referring the case, or if the case is ambulant, it is referred to the hospital as an inpatient with the recommendations. The chief of each service is at liberty to alter the plan of treatment according to his own judgment, but in nearly every instance thus far, they have agreed with the opinion of the Clinic. The Staff does not undertake any surgical treatment. In addition to the new cases, old cases who are progressing unsatisfactorily



ily are reviewed. Good therapeutic results are brought to the attention of the Staff. Visitors are present frequently, and it is to be hoped that as the Clinic efficiency improves more and more physicians will avail themselves of the opportunities for the study of our malignant cases.

At these Conferences the work of our pathological staff has been invaluable. No longer does it suffice to obtain a report stating that a carcinoma or a sarcoma is present. The pathologist must give the histogenesis, the degree of malignancy and the radiosensitivity of each tumor. With this information and the clinical and other laboratory data, a rational guide for treatment is provided and prognosis made possible. This work has been accomplished most ably by Doctors Von Haam and Connell.

#### FOLLOW-UP

A very efficient Social Worker, Miss Louise Myers, has been associated with the Clinic from the start. Patients must be seen at regular intervals in order to check the progress of their malady. Many serious difficulties are encountered in accomplishing this, as many of the patients do not live in New Orleans, and many are of a low cultural level. Despite this, the follow-up of cases has been excellent. This is an essential factor in the work of the Clinic, and the Staff contemplates, whenever possible, to follow-up every proved malignant case for at least five years unless death occurs sooner.

#### EQUIPMENT

All the surgical and diagnostic facilities of the Charity Hospital of Louisiana are available to Tumor Clinic patients. An electrosurgical unit is employed for the taking of biopsies. A Hoffman punch is available. No satisfactory transilluminating facilities are at present available. The Hospital has only one high-voltage roentgen therapy machine, with an air-cooled tube of an output of forty roentgens when run at 200 KV, 50 cm. S.T.D., and 8 milamp. current, with 0.5 mm. Cu and 1 mm. Al filtration. This unit is not sufficient for adequate therapy of every case. The Hospital owns five 50 mg. tubes, five 10 mg. needles, six 25 mg. tubes of radium element. Screening is insufficient in all of them. Interstitial radiation is no longer possible, though at first the Hospital had a few 5 mg. needles which were used for this purpose. Doctor Nix has on several occasions generously permitted the use of his own 1 mg. platinum-filtered needles, of which he has fifteen. The radiation therapy administered to patients is recorded as accurately as possible in special forms.

#### RECOGNITION

From what is stated above it can be seen that the Clinic satisfies the requirements set down by the Committee on the Treatment of Malignant Dis-

eases of the American College of Surgeons. A representative of this committee visited the Clinic in the spring of 1934 and as a result, the Clinic has been provisionally approved and appears in the list published by the Committee, February, 1935, in Surgery, Gynecology and Obstetrics.

#### PUBLICATIONS

At monthly meetings of the Staff, papers have been presented by members of various aspects of our work. These papers have appeared in the transactions of the Clinic published in the New Orleans Medical and Surgical Journal by special permission of the Editorial Board. Thanks are due to the Journal for this courtesy. The articles have proved sufficiently meritorious to deserve critical comment from the abstract sections of national cancer journals.

#### REVIEW OF CLINICAL MATERIAL

From September 8, 1933, to August 15, 1935, 587 patients have been seen at the Tumor Clinic. Of these 144 have died since their first visit, and 182 have been discharged from the Clinic because they had no neoplastic disease or because their growths were benign and cured. The others are being followed up at the Clinic with regularity.

It is exceptional to see true malignant cases in the early stages; in the majority, the growth is well advanced, offering a difficult, if not a hopeless, therapeutic problem. However, it can be said with satisfaction that many of the apparently hopeless cases have been kept controlled and are surviving far beyond our expectations.

It has been our observation that the doses of radiation administered to malignant growths heretofore were far too small to be effective. But the erroneous conclusion was prevalent that radiation was of no curative value. As to ultimate curative results, nothing can be said at present from the material seen at the Clinic; but it is established beyond a doubt that complete healing of primary growths, even quite extensive, can be attained by radiation properly delivered. It is to be emphasized nevertheless that the indications for radiation of all types are becoming better defined, and that experience and considerable knowledge are required to undertake the administration of x-rays or the application of radium.

It has become our policy to recommend preliminary radiation even in radioresistant growths, such as rectal cancers and bone sarcoma of the true osteoplastic type. Devitalization of the cancer cells, reduction in the size of the tumor, control of hemorrhage, and improvement of secondary infection are benefits derived from it. Subsequent surgical procedures are made easier, and the risk of causing metastasis by operative manipulations is reduced.

We consider the method of protracted, fractional, intensive roentgen therapy of malignancies of



the oral cavity a remarkable triumph of radiotherapy. The immediate results in nearly every one of our cases so treated have been most gratifying, and in due time a complete study thereof will be made.

#### CONCLUDING REMARKS

It is evident from the happenings of the period of this report that the function of such a unit is practical and of much value to the Hospital, and that the other Services of the institution suffer no detriment to the scope of their activities.

The Oscar Allen Tumor Clinic has developed well along the lines dictated at the time of its creation and as the efficiency of its service continues to improve, it will evolve into a most valuable agency for adequate care of the indigent victims of cancer of the State of Louisiana.

#### VICKSBURG SANITARIUM STAFF MEETING

The regular monthly meeting of the staff of the Vicksburg Sanitarium was held Monday, August 12, at 6:30 P. M.

The meeting was preceded by supper. After the business of the staff had been transacted and reports received and discussed from the records department, the following special case reports were presented:

1. Gall Stone Disease With Common Duct Obstruction.—Dr. A. Street.
2. Aseptic Meningitis.—Dr. L. J. Clark.
3. Pyelonephritis With Congenital Malformation of Genito-Urinary Tract—Nephrectomy.—Dr. G. C. Jarratt.

The next meeting of the staff will be held Monday, September 9.

Leon S. Lippincott,  
Secretary.

Abstract: GALL STONE DISEASE WITH CHRONIC OBSTRUCTIVE JAUNDICE.—Dr.

A. Street.

White male, aged 53 years, married, one child; occupation, farming; admitted to Vicksburg Sanitarium May 27, 1935. Chief Complaint.—Abdominal fullness and sense of gaseous distention immediately after meals; loss of weight and strength; chills and fever as high as 104° F.; attacks of jaundice and clay colored stools. Present Illness.—Onset three months ago. On account of chills and fever had been treated extensively for malaria. Had lost 20 pounds of weight. No colicky pain with radiation to scapula. Discomfort had been a fullness and burning sensation located in epigastrium and substernal region. There had been some nausea and vomiting. Bowels constipated. Jaundice intermittent. Afraid to eat because eating a full meal caused him to have a chill and fever. Previous History.—Pneumonia and left empyema 18 months ago; good recovery after thoracotomy. No typhoid; no syphilis. Speech has always been hesitating and of explosive type.

Family History.—One brother died of hematuria and one of heart disease. Two brothers living and well. One sister died of nephritis. Two sisters living and well. Physical Examination.—Well developed; thin; his clothes were too large for him. Appears weak. Skin dark but not yellow; sclera not yellow. Blood pressure 154/90; temperature 98° F.; pulse 80; respiration 18. Pupils equal and reacted. Knee jerks present and equal. Lymphatics not enlarged. Thyroid not enlarged. There was a left thoracotomy scar. Liver enlarged to one inch below costal margin and liver was tender; edge firm, not nodular. Spleen not enlarged. No ascites.

The patient's statement that eating a full meal was followed by chill and fever was doubted. He was admitted to the hospital and was fed a full meal at 12 o'clock noon. At 2:30 P. M. he was having a hard chill and by 4:40 P. M., temperature had climbed to 104° F.

Blood (May 28):Hb. 102%; erythrocytes 5,000,000; leukocytes 9,800; differential leukocyte count: small lymphocytes 27, large lymphocytes 3, monocytes 5, polymorphonuclears, neutrophils, mature 16, band forms 48; eosinophils 1; no malaria found. Agglutination tests for undulant fever negative. Wassermann, Kline, Kahn and Eagle flocculation tests negative. Urine: slight trace of albumin; some hyaline casts; no bile.

Roentgenographic and fluoroscopic examination of stomach and duodenum showed nothing abnormal. Cholecystography showed no filling of gall-bladder. Patient stated that he could not stay for further investigation at that time. Diagnosis was not clear. History described intermittent jaundice, practically painless, for 3 months. His statement that a full meal would give him a chill and fever apparently proved to be correct. He was advised to return later for more investigation and probably for operative exploration of liver ducts.

He returned and was readmitted July 14, 1935. He had continued to have the same symptoms. At this time he was definitely jaundiced. Temperature was normal. Physical examination was otherwise unchanged.

Blood (July 15): Hb. 82; erythrocytes 4,340,000; leukocytes 7,200; differential leukocyte count: small lymphocytes 27, large lymphocytes 3, monocytes 6, neutrophils, mature 53, band forms 10, eosinophils 1; no malaria found. Van den Bergh direct reaction; serum bilirubin 10; icterus index 26. Wassermann, Kline, Kahn, and Eagle flocculations tests negative. Urea nitrogen 23.50 mg. per 100 cc.; chlorides 450 mg. per 100 cc. Urine: Slightest possible trace of albumin; bile present; rare fresh red blood cell in sediment. Feces: urobilin present.

Preoperative Treatment.—Intravenous administration of calcium gluconate each day for five days; high carbohydrate and low protein diet;

provision for proper typed and tested donor for blood transfusion.

Operation.—July 19. Right high paramedian incision. Liver large, firm, mottled, appearance of early "hob nail" type. Gall-bladder large, tense and contained multiple stones. Adhesions to under surface of the gall-bladder were separated and the margin of gastrohepatic omentum opened, exposing common duct. Duct enlarged to one-half inch diameter and wall much thickened. Head of pancreas enlarged, of increased density and shotty. Enlargement of pancreas made palpation of lower end of duct inefficient but palpation gave impression of a firm mass in region of ampulla. Duct was incised and a large quantity of pale yellow bile was removed by suction as it flowed out. A scoop was introduced into lower end of duct and three soft stones removed, the largest being one-half inch in diameter. Scoop then easily passed into duodenum. Duct was then irrigated with sterile water. Exploration of hepatic end of duct showed no more stones. A "T" tube was placed in position and duct repaired snugly to exit of tube. Gall-bladder was then easily removed, from cystic duct upward, leaving ample peritoneal flaps. Thorough peritonealization of gall-bladder fossa and of common duct was then done. A Penrose drain was placed alongside the "T" tube and wound closed to exit of drains. Operation was well tolerated.

Postoperative Transfusion of 600 cc. of citrated blood three hours after operation. Nourishment and body fluids maintained by frequent administration of 5 per cent glucose in salt solution intravenously.

Convalescence was unusually satisfactory. Highest temperature was 100.8 F. Penrose drain was removed on the fourth day. On the tenth day discharge from the "T" tube was very profuse and pale. It was felt probable that pancreatic secretion was being drained through it and it was, therefore, removed. Twenty-four hours after removal of tube drainage stopped and there was no more bile stain on dressings. Patient was discharged in good condition 17 days after operation. At the time he was able to take full diet without discomfort.

**Abstract: PYELONEPHRITIS WITH CONGENITAL MALFORMATION OF GENITO-URINARY TRACT—NEPHRECTOMY.**

Dr. G. C. Jarratt.

White male, aged 22 months. Present Illness.—First admitted to Vicksburg Sanitarium, March, 1935, with resolving broncho pneumonia and bilateral otitis media from which he recovered with rest in bed and incision of both tympanic membranes. Blood at that time showed hemoglobin 92 per cent;

erythrocytes 3,370,000; leukocytes 17,000; polymorphonuclears 67.5 per cent; lymphocytes 32.5 per cent; no malaria found. Several specimens of urine showed numerous pus cells. Past History. One of unlike twins and birth history normal. Had been well except since six months of age had had periods with high fever for five or six days, occurring about every three or four weeks and attributed by mother to "teething" since there seemed to be no other explanation for fever. Parents were instructed to return home and to come back to the Sanitarium when infant had thoroughly recovered from respiratory infection for cystoscopic examination. It was felt that the pyuria was a condition of long standing and needed investigation. Infant returned April 25 for cystoscopic examination. Mother stated that infant had been well except for fever for six days, varying between 101° and 104° F. Physical Examination.—Essentially normal except for marked heat rash over body. Intravenous injection of skiodan given and pyelogram revealed dilatation of left ureter near ureterovesical junction but no double ureter. Cystoscopic examination, April 26, with pyelogram of both kidneys, showed right kidney pelvis and ureter normal; left ureter dilated at two points with retention of oil at junction of middle and lower thirds and also at junction of middle and upper thirds, also indefinite kidney pelvis. Urine from right kidney revealed only a few leukocytes and culture positive for *B. coli*. Urine from left kidney revealed numerous pus cells and culture positive for *B. coli*. Phenolsulphonphthalein given intravenously appeared from catheter from right kidney in 4½ minutes; no dye from left kidney in ten minutes. Blood (April 25); erythrocytes 4,070,000; hemoglobin 77; leukocytes 9,800; polymorphonuclears 50 per cent; lymphocytes 46 per cent; coagulation time 3½ minutes; no malaria found. Due to the fact that a condition existed in the left ureter which could not be corrected in situ, left kidney was not functioning, and for fear of involvement of the one remaining good kidney, left nephrectomy was advised. Infant returned June 1 with history of fever for five days of 101° to 104° F and many pus cells in several specimens of urine. Procedure.—Left nephrectomy was performed on June 3. A small kidney was found with double ureters leading to it, one, the normal one, leading to normal position of pelvis, and a lower, large, dilated and inflamed one leading to lower pole of kidney. These were ligated near vesical entrance and kidney removed. Microscopic examination showed little normal kidney tissue present and marked inflammatory changes in the large and dilated ureter. Subsequent.—Recovery was uneventful and patient was discharged on the nineteenth day postoperative.

Seen in office July 21 and had gained three pounds in weight and was doing nicely. Specimen of urine showed numerous pus cells coming no

doubt from the small remaining portion of large dilated ureter which should eventually atrophy allowing infection to subside.

## LOUISIANA STATE MEDICAL SOCIETY NEWS

Monroe, La., August 17, 1935.

To the Members of the Louisiana State Medical Society:

For your information the following correspondence is being made public through the medium of our official Journal. This correspondence is self explanatory and evidence of the efforts put forth by your officials in an endeavor to simplify and equalize the administration and distribution of practice among F. E. R. A. clients.

You can readily see the attitude assumed by those responsible for the administration of medical care to the unfortunate F. E. R. A. client and the utter confusion which appears to exist. Regardless of this, we shall continue our efforts.

Since there is about to be inaugurated an extensive work program in the State under the Works Progress Administration, I would especially call your attention to the letter from Mr. J. O. Salassi, Jr., State Compensation Officer, Works Progress Administration. This is altogether separate and distinct from the F. E. R. A.

I would urge each of you who are not familiar with working of the United States Employees' Compensation (under which medical care is to be rendered to injured W. P. A. employees) to read the synopsis of Rules and Regulations No. 1, promulgated by this commission July 15, 1935, and published in The Journal A. M. A. August 3, 1935, page 373.

The full text of the Rules and Regulations No. 1 may be obtained by local society officials by addressing the above Commission at Washington, D. C.

Yours very truly,

Courtland, P. Gray, M. D.,  
President.

Monroe, La., June 21, 1935.

Mr. Frank Peterman,  
State Director,  
F. E. R. A.,  
New Orleans, La.

Dear Sir:—

Referring to conversation with you on May 21, in regard to a better and more simple execution of the present agreement between the Louisiana State Medical Society and your organization, for the furnishing of medical care to F. E. R. A. clients, I wish to advise as follows:

After the conversation with you I advised the Executive Committee of the Louisiana State Medical Society of same, and that you suggested the

Society submit to you in writing its recommendations for a better working plan.

There was considerable discussion among the members of the Executive Committee about the plan as a whole, and it was finally decided, that inasmuch as the Society members were giving their service at greatly reduced prices in keeping with the Federal regulations, the profession should have some voice in the plan of furnishing the service.

Since you have appointed a Director of Personnel in each Congressional District of the State, it is my understanding that this appointee will have charge of all F. E. R. A. interests in that district. With this understanding I am suggesting the following plan for your consideration and approval.

First, a thorough understanding of the Federal regulations regarding the furnishing of medical care. In these regulations it is clearly stated who, when and how, is entitled to medical care. Hereafter this has been left entirely in the hands of the various so-called "visitors", who are wholly without any medical knowledge and whose experience with sick people is nil.

Second, some one person in each local office whose duty will be to issue all orders to doctors for medical care. This individual to be advised that he is to co-operate freely with the doctor, the sick patient or his family and the Advisory Committee. (This committee will be mentioned later.) This same person to receive such telephone or written reports on any particular case that the attending physician deems necessary. Also, there be some place whereby patients may receive authorized treatment when the local F. E. R. A. office is closed. (Night, Sundays and holidays.)

I speak with definite knowledge when I state that under the present set-up many worthy F. E. R. A. clients in distress have been refused medical attention by their "visitor" and it has been impossible for them to see anyone in authority at the local office. In many instances the client has been offered orders to only certain doctors. At the present time there appears to be an utter lack of uniformity in the various "visitors" issuing orders for medical care, hence the preceding suggestions and comment.

Third, there be a Medical Advisory Committee in each Parish or District whose duty will be to co-operate with the F. E. R. A. office in any advisory capacity, see that the practice is distributed among all the doctors, consult with the attending physician in regard to any case about which a



dispute might arise, advise the F. E. R. A. in regard to the furnishing of medical care in emergency cases, and finally to take up any and all medical matters with the Director of Personnel in their respective district.

The Medical Advisory Committee shall consist of three members who shall be elected by the local Parish Medical Society. In the event there is no organized local society, the District Medical Society shall elect one member from each Parish represented in the District Medical Society who shall serve in a like manner as those in Parishes with an organized society.

In addition, the State Medical Society feels that the allotted funds for medical care is entirely too small as compared with other expenditures. This naturally throws a great burden on a profession who is ever willing to contribute their services to any reasonable extent, but who do feel that some consideration should be extended them in the handling of F. E. R. A. clients.

With assurance that the Louisiana State Medical Society is willing to continue its co-operation, I am asking that you favor me with a reply as early as is convenient.

Yours very truly,

C. P. Gray, M. D.,  
President.

June 26, 1935.

Dr. C. P. Gray, President,  
Louisiana State Medical Society,  
Monroe, Louisiana.

Dear Dr. Gray:—

This acknowledges receipt of your letter of the 21st of June, making certain recommendations in regard to the relations between the medical profession and the Relief Administration. I am referring the matter to the head of the Social Service Division for such recommendations as she may wish to make.

Very truly yours,

Frank H. Peterman,  
Administrator.  
July 2, 1935.

Dr. C. P. Gray, President,  
Louisiana State Medical Society,  
1430 Tulane Avenue,  
New Orleans, Louisiana.

Dear Doctor Gray:

I referred your letter of June 21st to Miss Barrett and for your information enclose a memorandum which I have just received from her.

I will be very glad to have you discuss the matter with her at any time it suits your convenience.

With kind, personal regards and best wishes, I remain,

Yours sincerely,

Frank H. Peterman,  
Administrator.

# SOCIAL SERVICE DIVISION

## Inter-Office Correspondence

June 29, 1935.

TO: Mr. Peterman

FROM: Miss Barrett.

I have read the attached letter from Dr. Gray with a good deal of interest. I wish that any decision concerning the points he raises could be delayed until we know more definitely what our medical program is to be. We have been expecting some definite announcements from Washington along this line. While they have been delayed in reaching us, I know that the Washington office is mindful of the whole medical program.

I think some of Dr. Gray's suggestions are not entirely practicable although I would be very glad to discuss his entire letter point by point with him if we are to continue to have a medical program.

Monroe, La., July 20, 1935.

Mr. Frank H. Peterman, Administrator,  
Federal Emergency Relief Administration,  
New Orleans, Louisiana.

Dear Mr. Peterman:

Acknowledgement is made of your communication of July 2, with enclosure from Miss Baud Barrett, Social Service Director, in regard to the suggested plan for the execution of the agreement now in force between your organization and the Louisiana State Medical Society, which was submitted to you June 21, 1935.

If you recall at the time (May 31) of my conversation with you relative to the furnishing of medical care to F. E. R. A. clients, you requested that our society submit direct to you a suggested plan for the furnishing of this care. In keeping with your request this was done and from your letter of July 2, I understand same was referred to Miss Barrett, Social Service Director, for final action. Am I correct in this assumption and are we to take up with Miss Barrett the final acceptance or rejection of our plan?

Complaints are reaching us from Doctors from all over the State at the manner in which medical care is attempting to be furnished F. E. R. A. clients and the little consideration being shown them. I feel sure you do not know or realize the great burden the medical profession has attempted to shoulder during the present economic crisis. Many of our members feel that they should have all the benefits they are entitled to under the original Federal Regulations providing for medical care to F. E. R. A. employees.

I have no objection to discussing our suggested plan with Miss Barrett, Social Service Director, but feel that little will be accomplished unless we have your initiation and support, which I am constrained to believe you will readily give after you have given this matter your serious consideration.



Past experience of the medical profession in dealing with the social service worker alone has not been satisfactory. We recognize the great value of the social service worker in their field and in carrying out medical relief plans but feel that their efforts in furnishing medical care should be directed by and in cooperation with the medical profession. In consideration of this and our earnest desire to have a mutual cooperation between our organization and yours, I would appreciate knowing that I have your cooperation before making any attempt to discuss the matter with Miss Barrett.

In view of the fact that many of our members are interested in, and writing for information regarding the matter referred to, I would appreciate a reply from you as early as possible.

Yours very truly,

Courtland P. Gray, M. D.,  
President.

Monroe, La., August 9, 1935.

Mr. Frank Peterman, State Administrator,  
Federal Emergency Relief Administration,  
New Orleans, Louisiana.

Dear Mr. Peterman:

Newspaper reports are to the effect that a rather extensive work program is about to be inaugurated in this State by the Works Progress Administration. In view of this, and the fact that the medical profession will be called upon to render aid to injured PWA employees I am addressing you.

No doubt you are aware of the fact that injured PWA employees are to be cared for according to Rules and Regulations laid down by the United States Employee's Compensation Commission, and that on July 15, 1935, this Commission promulgated Rules and Regulations No. I, which provides just how injured employees are to receive medical attention.

I note that the above mentioned Rules and Regulations state that there shall be on the staff of each State Works Progress Administrator, a "State Compensation Officer" who will handle all compensation cases and see that necessary medical care is furnished. In view of this and a more liberal attitude toward the medical profession, I am asking you to kindly compare the suggestions contained in my letter to you under date of June 21, 1935, relative to the furnishing of medical care to F. E. R. A. clients, also my letter of July 20, 1935, with the provisions of the above mentioned Rules and Regulations.

In the beginning of the F. E. R. A. there was issued Bulletin No. 7, which made provisions for medical care to F. E. R. A. clients, but this has not been followed in this State.

I believe if you will kindly refer to Bulletin No. 7 of Federal Emergency Relief Administration

and Rules and Regulations No. I, of the United States Employee's Compensation Commission, you will readily agree with me that the present plan for furnishing medical care to F. E. R. A. clients should, and could be greatly improved.

I have had no reply to my letter of July 20 and since that time serious complaints from doctors all over the State have been presented with reference to the manner in which medical care is attempted to be furnished F. E. R. A. clients.

Yours very truly,

C. P. Gray, M. D.,  
President.

August 13, 1935.

Dr. C. P. Gray, President,  
Louisiana State Medical Society,  
Ouachita Bank Bldg.,  
Monroe, La.

Dear Dr. Gray:

Your letter of August 9th, with respect to the furnishing of medical care to F. E. R. A. clients and W. P. A. employees, was referred to the undersigned for attention.

Since this particular Department has no jurisdiction as far as F. E. R. A. clients are concerned, except those suffering traumatic injury strictly in the performance of duty, it is our suggestion that further correspondence concerning the F. E. R. A. medical program in general be referred to Miss Maude Barrett, State Director of Social Service, Canal Bank Building, New Orleans, Louisiana. A copy of your letter is being referred to Miss Barrett.

The compensation program with respect to W. P. A. employees suffering traumatic injury strictly in the performance of duty will be administered in this State by the undersigned, in conjunction with his staff and an adequate representation in each of the eight districts into which the State of Louisiana has been divided. A rather technical procedure will be observed, since all cases will be subject to the final review and authority of the United States Employees' Compensation Commission. Generally speaking, however, Government medical facilities will be utilized for the care of injured W. P. A. employees as far as those facilities are adequate and available. Where such Government establishments are not available, however, private licensed physicians, qualified by experience in handling industrial cases, will be called upon to render the necessary medical treatment. Such private physicians will be paid for services rendered by the United States Employees Compensation Commission direct, on the basis of certain requests and vouchers which will be supplied by district compensation representatives at the time injured employees are referred for attention. Without a doubt, the undersigned will issue in the near future a bulletin or advice outlining the procedure as far as private physicians

are concerned, for the purpose of eliminating all possible delay in the payment of vouchers for medical services.

In that particular connection, it would be deeply appreciated if you will have your secretary submit a list, by parishes, if possible, of the members of the Louisiana State Medical Society, indicating those who are specialists in respective fields.

We appreciate very much the cooperation evidenced by you in handling traumatic injury cases in the past, and trust that we are not too presumptuous in asking for the information outlined above.

Yours very truly,  
G. O. Salassi, Jr.,  
State Compensation Officer.

Monroe, La., August 16, 1935.

Mr. G. O. Salassi, Jr.,  
State Compensation Officer,  
Works Progress Administration,  
New Orleans, Louisiana.

Dear Mr. Salassi:

I wish to thank you for your letter of August 13, which is in reply to that part of my letter of August 9, with reference to PWA employees, addressed to Mr. Frank Peterman.

I have carefully noted the program outlined in your letter, with respect to the medical care of W. P. A. employees suffering traumatic injury while in the performance of duty, which is in strict keeping with Rules and Regulations No. I, promulgated by the United States Employees' Compensation Commission, July 15, 1935.

I also note that you have already been designated State Compensation Officer, as provided for in the above Rules and Regulations. This leads me to believe that you will see that medical attention will be provided for injured W. P. A. employees as provided for by the United States Employees' Compensation Commission. In doing so I feel that I can assure you the full cooperation of all members of the Louisiana State Medical Society.

I am requesting Dr. P. T. Talbot, Secretary, to mail you the list of names as requested in your letter.

In issuing your final instructions for the carrying out of your program for medical care to W. P. A. injured, may I suggest that you make it plain that this program is in no wise connected with that for the medical care of FERA clients.

Assuring you of my full cooperation, I am,

Yours very truly,  
C. P. Gray, M. D.,  
President.

August 12th, 1935.

Dr. C. P. Gray, President,  
Louisiana State Medical Society,  
Monroe, Louisiana.

Dear Dr. Gray:

We have delayed answering your letter of June 21st addressed by Mr. Frank H. Peterman with the hope we would receive instructions from Washington governing the future medical program in Louisiana. However, up to this date we have not been informed as to what this program will embrace and, therefore, we are unable to give you a definite decision on the matters mentioned in your letter.

We will communicate with you further when we receive the anticipated instructions from Washington.

Very truly yours,  
J. H. Crutcher,  
Assistant Administrator.

Copy to:  
Louisiana State Medical Society,  
1430 Tulane Avenue,  
New Orleans, Louisiana.

August 15, 1935.

Dr. C. P. Gray, President,  
Louisiana State Medical Society,  
Ouachita Bank Bldg.,  
Monroe, Louisiana.

Dear Doctor Gray:

Referring to your letter of August 9th, to which Mr. Salassi, State Compensation Officer, on August 13th replied to that part pertaining to medical aid to injured W. P. A. employees. However, we notice in your letter you state you have had no reply to your letter of July 20th.

On August 12th I replied to your letters of June 21st and July 20th, stating that we had been instructed by Washington to make no changes in regard to medical attention for our relief clients until they advised us further.

Very truly yours,  
J. H. Crutcher,  
Assistant Administrator.

Monroe, La., August 17, 1935.

Mr. J. H. Crutcher,  
Assistant Administrator,  
Federal Emergency Relief Administration,  
New Orleans, Louisiana.

Dear Mr. Crutcher:

I acknowledge receipt of your letter of August 12 and of August 15, which in view of past correspondence with Mr. Peterman are a little confusing.

If you will refer to my letter to Mr. Peterman under date of June 21, you will see it contains an outline of a suggested plan for IMPROVING the administration of the present plan for furnishing

medical care to FERA clients. On July 2 Mr. Peterman wrote me that this letter had been referred to Miss Maud Barrett.

On July 20 I wrote Mr. Peterman in reply to his letter of July 2, which enclosed notation from Miss Barrett to him, asking several questions. This letter I have had no reply to.

By referring to my letters of the above dates you will readily see that what the Louisiana State Medical Society desires is, a better and more competent administration of the agreement now existing between the two organizations. The administration of our agreement now in force is, on the part of the FERA entirely in the hands of lay workers, without any medical knowledge and is being very poorly administered. Serious objections are coming from doctors all over the State, so much so until I fear the present plan is in danger unless prompt action is taken by the State Administrator or his representative.

Yours very truly,

Courtland P. Gray, M. D.,

President.

#### EAST AND WEST FELICIANA BI-PARISH

The Bi-Parish Medical Society was called to order by President N. F. Stafford in the East Louisiana State Hospital, Jackson, June 3, 1935. After a most enjoyable dinner in the hospital dining room, the society reconvened to the staff room for the scientific program. Dr. E. M. Robards was appointed secretary pro tem. Dr. Riche read a paper on some of the "Routine Procedures in General Medicine." Dr. Michael DeBaKey's subject was "History, Indications and Technic of Blood Transfusion." Both papers were freely and favorably discussed by members present. Drs. Riche and DeBaKey were extended a vote of thanks for their papers.

The Bi-Parish Medical Society was called to order in the East Louisiana State Hospital, Jackson, August 7, 1935. After a bounteous repast in the hospital dining room, the Society repaired to the staff room for the scientific program. Dr. U. S. Hargrove of Baton Rouge read a learned discourse on "Congenital Polycystic Kidneys" with a report of a case from this parish. Dr. Hargrove's paper was freely and favorably discussed by members present. Society adjourned to meet the first Wednesday in October, 7:30 P. M., 1935, in the Rist Hotel, Clinton, La.

N. F. Stafford, President.

E. M. Toler, Secretary.

Since our last meeting we have been reminded of the uncertainty of life and the certainty of death, in the passing from this earth on July 9,

1935 of one of our most cherished and beloved members, Dr. Jesse Worthy Lea.

Dr. Lea was born October 5, 1868 near Jackson, Louisiana. He attended Millwood, a private school of Jackson, and Centenary College. His professional training began in the Tulane University where he graduated in 1891. His graduation was followed by post graduate work in New York. He began his practice in West Feliciana. About two years later he accepted a position on the staff of the East Louisiana State Hospital where he remained eight years. He then moved to Texas for a period of one year. Returning to Jackson in 1901, he was engaged in general practice until his death, the only interruption being two years spent in the army service during the World War. His record in service merits the highest commendation, having been promoted from a lieutenant to a major during his stay.

For many years he was a member of the board of administrators of the East Louisiana State Hospital and afterwards was a consulting physician. His contributions to the programs of the Medical Societies to which he belonged showed his unflinching interest in scientific medicine.

Dr. Lea was a member of the Kappa Sigma fraternity of Centenary College, a member of the Woodmen of the World a member, of the Methodist Church and a Mason, having been past master of the St. Albans lodge of Masons at Jackson, La.

His interest in organized medicine was maintained throughout the years of his practice. He was a charter member and first president of the Sixth District Medical Society and was affiliated with the Bi-Parish Medical Society (East and West Feliciana) having served as president of this organization several times. He was a member of the State Medical Association, Southern Medical Association, American Medical Association, and a fellow of the American College of Physicians.

He is survived by his wife who was Miss Grace Mardenbrough of New Orleans, and his daughter, Helen.

He combined professional qualifications of the highest order with the attributes of a gentleman. His kindness, sterling integrity and altruism endeared him to all with whom he came in contact.

The medical profession represented by the Bi-Parish Medical Society in the passing of Dr. Lea has lost one of its most valued and beloved members, therefore:

Be it resolved that the Bi-Parish Medical Society extend to his family our sincere sympathy and great sorrow.

Be it further resolved that the preamble and resolutions be spread on the minutes of the Bi-Parish Medical Society as a tribute to his memory.

Be it further resolved that a copy of these resolutions be sent to Dr. Lea's family, also a copy

be sent to the New Orleans Medical and Surgical Journal.

Signed:

J. J. Ayo, M. D.,  
E. M. Toler, M. D.,  
C. S. Miller, M. D.,  
E. M. Robards, M. D.

#### NEWS ITEMS

Dr. Robert A. Strong, Professor of Pediatrics of Tulane School of Medicine, was a guest speaker at the recent meeting of the Harrison-Stone County Medical Society, on August 7.

Dr. Thomas Benton Sellers, with his family, will leave next week for a motor trip to Montreal and Quebec prior to his attendance at the annual meeting of the American Association of Obstetricians, Gynecologists and Abdominal Surgeons to be held September 16, 17 and 18 at Skytop Lodge in the Poconos Mountains of Pennsylvania.

Dr. Wm. E. Clark was promoted to Assistant Professor of Ophthalmology, Graduate School of Medicine, Tulane University of Louisiana.

Dr. Willard R. Wirth was promoted to Assistant Professor of Medicine, Graduate School of Medicine, Tulane University of Louisiana.

Surgeon T. B. H. Anderson was relieved from duty New Orleans, La., on or about August 17, and assigned to duty at the Marine Hospital, Baltimore, Md., in charge of station.

Past Assistant Surgeon H. L. Skinner was relieved from duty at New Orleans, La., and assigned to duty, Marine Hospital, Baltimore, Maryland.

Surgeon R. L. Waugh was relieved from duty at San Francisco, Calif. on July 20, and assigned to duty at the Marine Hospital, New Orleans, La.

Senior Surgeon W. H. Slaughter was relieved from duty at Galveston, Texas, about August 7, and assigned to duty at New Orleans, La. in charge of the Marine Hospital there.

Passed Assistant Surgeon W. C. Plumlee was relieved from duty at New Orleans, La., and assigned to duty at the U. S. Marine Hospital at Stapleton, New York.

The 14th Annual Scientific and Clinical Session of the American Congress of Physical Therapy will be held in Kansas City, Mo., September 5-12, 1935.

The Eighth Annual Graduate Fortnight of the New York Academy of Medicine will be held in New York, October 21 to November 2, 1935, subject

Diseases of the Respiratory Tract. The profession generally is invited to attend.

#### MISSISSIPPI VALLEY MEDICAL SOCIETY

The first annual meeting of the newly formed Mississippi Valley Medical Society will be held at Quincy, Ill., October 2-3-4. The meeting and commercial exhibit will be held in the new and thoroughly modern Lincoln-Douglas Hotel. There will be morning, afternoon and evening sessions of a most practical character. The entire program is arranged to especially appeal to the general practitioner.

Among the eminent clinicians on the program are:

Isaac A. Abt, M. D., Prof. of Pediatrics, Northwestern University School of Medicine.

Fred H. Albee, M. D., Prof. of Orthopedic Surgery, New York Post-Graduate Medical School and Hospital.

W. Wayne Babcock, M. D., Prof. of Surgery, Temple University School of Medicine.

Hugh Cabot, M. D., Prof. of Surgery, University of Minnesota Graduate School of Medicine.

Arthur C. Ernestene, M. D., Cardiologist, Cleveland Clinic.

Frederick A. Figi, M. D., Assoc. Prof. of Laryngology, University of Minnesota Graduate School of Medicine.

Thomas E. Jones, M. D., Gynecologist, Cleveland Clinic.

Wm. C. MacCarty, M. D., Prof. of Pathology, University of Minnesota Graduate School of Medicine.

Albert Soiland, M. D., Chairman, Malignancy Board, California Hospital of Los Angeles.

These men will each give two or three practical lectures or clinical demonstrations and will be assisted by 27 specialists from Illinois, Missouri and Iowa who will conduct a clinical lecture course. There will be a total of over 50 lectures and demonstrations for the three day session. All ethical physicians are cordially invited to attend the meeting and a detailed program may be obtained from Harold Swanberg, M. D., Sec.-Treas. 211-224 W. C. U. Bldg., Quincy, Illinois.

#### RELIABLE APPARATUS

The New Orleans Medical and Surgical Journal has received from the American Medical Association a small pamphlet containing a list of the apparatus accepted by the Council on Physical Therapy, the first one published under the direction and supervision of the Council. In addition to the list and description of accepted apparatus, the pamphlet contains indications for the use of each type and a statement relative to efficacies and dangers.

This pamphlet is a real contribution on the part



of the American Medical Association in behalf of rational therapeutics—an effort to help place physical therapy on a sound, scientific basis for the benefit of the medical profession.

One of the purposes of the Council on Physical Therapy is to protect the medical profession, and thereby the public, against inefficient and possibly dangerous apparatus and against misleading and deceptive advertising in connection with the manufacture and sale of devices for physical therapy.

*Apparatus Accepted* includes all the devices accepted by the Council prior to May 1935. Any physician can obtain this pamphlet free by writing to the Secretary, Council on Physical Therapy, A. M. A., 535 North Dearborn Street, Chicago, Illinois.

Hanson, Tuite Howe, Donaldson: Born in 1868, graduated from Tulane University School of Medicine in 1895. Member of the Ascension Parish Medical Society, Louisiana State Medical Society, and American Medical Association. Dr. Hanson was for many years president of the police jury of his parish. He died in Donaldson on August 11, 1935. He is survived by his wife, two daughters, two brothers, and one sister.

#### WOMAN'S AUXILIARY

##### LOUISIANA STATE MEDICAL SOCIETY

Mrs. Hermann E. Gessner, President, New Orleans, La.

Mrs. James Byron Vaughan, Pres.-Elect, Monroe.

Mrs. Samuel B. Kreeger, 1st Vice-Pres., Lake Charles.

Mrs. L. E. Shirley, 2nd Vice-Pres., Jennings.

Mrs. D. T. Milam, 3rd Vice-Pres., Monroe.

Mrs. Harry R. Marlatt, 4th Vice-Pres., Homer.

Mrs. Jos. E. Heard, Treasurer, Shreveport.

Mrs. James W. Warren, Rec. Sec'y., New Orleans.

Mrs. Leonhard E. Devron, Corr. Sec'y., New Orleans.

Mrs. C. E. Rew, Parliamentarian, Shreveport.

#### JEFFERSON DAVIS PARISH

The Woman's Auxiliary to the Jefferson Davis Parish Medical Society held the last meeting of

the season in June at the home of Mrs. L. E. Shirley in Jennings. We were delighted to have Mrs. J. E. Faulk of Crowley, Acadia Parish, join our little group. Acadia Parish has no auxiliary, so according to a resolution adopted at the last State Convention, Mrs. Faulk will be a member-at-large of the State Auxiliary and a guest member of the parish.

The program for this meeting consisted of excerpts from James Lane Allen's "As a Man Thinketh," read by Mrs. Martin. Mr. Allen says: "This little volume (the result of meditation and experience), is not intended as an exhaustive treatise on the much-written-upon subject of the power of thought. It is suggestive rather than explanatory, its object being to stimulate men and women to the discovery and perception of the truth; that:

"They themselves are makers of themselves, by virtue of the thoughts which they choose and encourage; that mind is the master weaver, both of the inner garment of character and the outer garment of circumstance, and that, as they may have hitherto woven in ignorance and pain, they may now weave in enlightenment and happiness."

Mrs. C. A. Martin, Chairman,

Press and Publicity.

Note:—Dear Readers, Publicity Chairman and Secretaries:

Please do not forget to send in any news that you think might be interesting to our Auxiliary. It is our endeavor, since the Medical Profession has so kindly and graciously consented to give us space in the "Journal", to avail ourselves of this opportunity of putting in the hands of our members all news pertaining to auxiliary activities, and the Journal is our only medium of contact. Let us show our appreciation to the profession by having a column every month, and don't forget that you, and you, and you, can do your part as we are, each one of us, a part of our Auxiliary. Either send your news in to your parish Publicity Chairman or direct to me. And many, many thanks.

Mrs. George D. Feldner, Chairman

Press and Publicity,

3814 Louisiana Avenue Parkway,  
New Orleans, La.

## MISSISSIPPI STATE MEDICAL ASSOCIATION NEWS

## UNIVERSITY OF MISSISSIPPI SCHOOL OF MEDICINE

Friends of the University of Mississippi School of Medicine will be interested in the following quotations from a letter which has just been received from the Secretary of the Council on Medical Education and Hospitals of the American Medical Association. This will indicate to all that authorities have not been acting arbitrarily in the matter of recent policies adopted by the administration of the Medical School.

"American Medical Association

"535 North Dearborn Street

"Chicago

"Council on Medical Education and Hospitals

"July 24, 1935

"Dr. B. S. Guyton

"Acting Dean, University of Mississippi

"School of Medicine

"University, Mississippi

"My dear Doctor Guyton:

"In response to your letter of July 22 let me say that I am in full accord with the decision of your Board of Trustees not to enroll a freshman class for the session of 1935-36. This procedure will tend to simplify your problem.

"Our Council will meet about the middle of September and will doubtless discuss the situation in which the two year schools now find themselves but whether it will arrive at a definite and formal statement of its future policy I cannot say. You will recall that when the Council first gave its approval to those schools which teach only a part of the medical curriculum, the arrangement of subjects was such that the whole of the first two years was devoted to laboratory teaching while clinical teaching, including in most cases gross pathology, was deferred until after the beginning of the third year. During the last two decades a change has come about. Now practically all of the complete schools have introduced clinical courses into the first and second years. Because of a lack of clinical material the two year schools have been unable to keep step with this program. It is practically impossible for them to give satisfactory courses in physical diagnosis and pathology, to say nothing of the introductory courses in medicine, surgery, pediatrics, and obstetrics. The ultimate solution of this problem I cannot foresee but some change in the relationship between the partial schools and the complete schools seems to be inevitable.

"For the teaching of physical diagnosis, gross pathology and the introductory clinical courses, it is necessary to have a very considerable amount of clinical material, the necessity for which is

not eliminated by having small classes. In order that the students see a sufficient variety of fresh pathological specimens, it is necessary to have at hand active autopsy service. Similarly in teaching medicine or physical diagnosis, it does not suffice to have available merely a sufficient number of patients so that one may be assigned to each student for examination. One must have at all times a sufficient number of patients so that the instructor may be able to select the particular disease and type of disease that he wishes the student to study at that particular time. Such facilities, of course, do not exist in Oxford. They could be provided if the state were willing to construct and maintain a free hospital with at least 200 beds. Even then there would be an obvious lack of ambulatory patients for teaching purposes.

"Cordially yours,

"(Signed) William D. Cutter."

To the Medical Profession:

The Committee on Medical Relief provided for by the State Meeting in Biloxi last May has been ready to function for two months or more, but Mr. Wayne Alliston has not yet taken over the relief work for Mississippi.

It is absolutely useless to call a meeting of this committee or to meet with the Board of Public Welfare as long as Mr. Braun is in charge. We know from past experiences that we get the hot end of any contract made with the present set up. We are hoping that Mr. Alliston will replace Mr. Braun in the very near future.

T. M. Dye.

## "OUR NATIONAL HOSPITAL EMERGENCY"

From an Editorial in The Saturday Evening Post  
issue of August 10, 1935

The voluntary hospitals in New York City alone are some \$20,000,000 in debt, one-quarter of which is for current or recent liabilities. So grave is their plight that they will presently unite in a vigorous drive to raise about one-half of the larger sum.

The alarming thing is that nearly every city is proportionately as hard hit as New York, or worse hit. Voluntary hospitals have been operating in the red for years; and though they have been making a gallant struggle to carry on, last year no fewer than 103 had to shut up shop. During the previous five years, 338 of them were forced out of service.

The institutions which closed were, of course, those supported by private gifts and effort. The importance of their work may be seen from the fact that in 1934 our voluntary hospitals admitted

nearly 5,000,000 patients, as against about 2,000,000 cared for in hospitals supported by taxpayers.

According to figures gathered for The Saturday Evening Post by Dr. Bert W. Caldwell, executive secretary of the American Hospital Association, income from patients dropped more than 30 per cent between 1931 and 1934, while the volume of free service increased from 15 per cent to nearly 60 per cent. Moreover, 70 per cent of the patients who come to the clinics are receiving free care. Income from gifts and contributions has fallen off by about 78 per cent.

Endowments and contributions now meet only about one-tenth of running expenses; and as pay patients turn in only enough revenue to meet about 60 per cent of the care of all cases, we have a theoretical deficit of perhaps 30 per cent. When we take into account the fact that comparatively few hospitals can count upon revenue from endowments, we are forced to the conclusion that most of them are running at a loss of 40 per cent.

(Received from Robert Jolly, president, American Hospital Association).

#### TRAVELING DOCTOR

Pleased acknowledgment is made of a post card and greetings from Dr. J. P. Wall. The card bears the post mark Roma, Ferrovia, and shows the Fountain of Trevi. Suggestions as to significance are invited.

#### TUBERCULOSIS ABSTRACTS

##### The National Tuberculosis Association

Clinicians and epidemiologists are concerned with the prevention of the spread of tuberculosis. Since the tubercle bacillus is the sole direct cause of tuberculosis, emphasis has been placed on the sputum which conveys the bacilli and on closeness of contact between patients and healthy persons. Isolating sputum-positive patients and collapsing the infected lung to prevent the overflow of infected sputum have been the chief measures employed for the prevention of the spread of the disease. A pathological phenomenon of primary significance, which has been largely overlooked, is softening of the caseous tubercle. Esmond R. Long, in an article in the Journal of the American Medical Association, points out the significance of caseation and softening, clinically and epidemiologically. The summary and brief abstracts are here given.

##### Softening of the Caseous Tubercle

1. Tuberculosis in its epidemiologic aspects has its source in a specific pathologic phenomenon, softening of the caseous tubercle.

This is the key problem in tuberculosis. If caseous tubercles did not soften the disease would be practically self limited. The course of

pulmonary tuberculosis may be summarized as follows. Following infection, cellular and subsequent caseous tubercles are formed and some of these soften. Caseous matter discharged into the bronchioles is aspirated. New tubercles are formed, some of which in turn soften. If the softened matter is coughed out, it may infect other people.

2. The phenomenon of softening of the tubercle has long been recognized but not commonly identified as a specific pathologic process, distinct from caseation.

Laennec described the softening and liquefaction of caseous tubercles and their significance, but in modern textbooks the two phenomena of caseation and softening are commonly not separated, and the distinctive nature of the latter process is not stressed.

3. The significance of softening of the caseous tubercle for epidemiology lies in the fact that associated with it is an enormous multiplication of tubercle bacilli. The latter are commonly hundreds or thousands of times as numerous in the semiliquid contents of softening caseous nodules as in the necrotic walls of old cavities.

Even less attention has been directed to the collateral event with the softening, namely, an extraordinary multiplication of tubercle bacilli. Koch noticed that tubercle bacilli were present in greatest number in the interior of cavities, the walls of which are undergoing rapid liquefaction. When the product of tubercle infiltration first discharges into a bronchus it has maximum infective power. Not before nor again after are tubercle bacilli to be found in the region concerned in as great number. The soft yellow lumps sought by the technician examining sputum are nothing more than bits of debris from the liquefying caseous nodules.

4. Three types of case (illustrated by reports in the article) may be distinguished in a general way on the basis of the number of bacilli in the softening regions, a chronic type with a moderate concentration of bacilli in the softening lesions, an intermediate type, and an acute type with vast numbers of bacilli.

The three cases cited were an elderly Jew with pulmonary tuberculosis of exceptional chronicity, a young American white adult with pulmonary tuberculosis of ordinary duration and a Negro child with "adult type" tuberculosis of extraordinary severity and rapid progression. All three died and came to autopsy. The phenomena of softening and bacillary multiplication were qualitatively the same in all three but varied quantitatively with the type of case. They represent the two extremes and the average in the intensity



of the processes concerned. All three cases exhibited the presence of enormous numbers of tubercle bacilli in caseous lesions undergoing softening and the number of bacilli was much greater in the softening lesions than in the walls of old cavities (commonly considered the chief source of spread of bacilli).

5. The fundamental nature of the process of softening is still unknown. It is not equivalent to suppuration. Attempts to put it on an allergic basis have not been entirely successful.

Neither the cause of the softening nor the explanation of the enormous number of tubercle bacilli present is definitely known. Softening is not due to the proteolytic action of leucocytes, present as a result of secondary bacterial invaders. Bacteria and fungi not chemotactic for leucocytes but possibly rich in proteolytic enzymes, do not account for it. That softening is an allergic process has been suggested but there are several objections to this view.

It is not yet clear whether the tremendous growth of tubercle bacilli precedes or follows the softening. If subsequent research proves that the softening comes first, the multiplication of bacilli can be explained on the basis of the new opportunity afforded by the softening for oxygen ingress and flow of fluids, containing nutritive elements. Lurie has suggested this for the analogous process in tuberculous animals.

6. The softening tubercle should receive more clinical consideration than is at present the case. Successful treatment of tuberculosis by lung collapse owes its favorable outcome as much to prevention of drainage of liquefying tubercles as to the obliteration of large cavities. Lung collapse, improperly applied, particularly with excessive pressure, even when obvious cavities are obliterated, may result unfavorably through expulsion of highly infective liquefying matter into tributary bronchioles.

The most appropriate lung collapse, as far as the softening tubercle is concerned, is that which stops motion of the lung and partially or completely obliterates the small bronchiolar outlets from the liquefying masses.

Unfortunately, softening lesions can probably not be recognized clinically. Even roentgenograms do not distinguish unsoftened and softening caseous nodules until the latter progress to small cavities. Yet from the standpoint of treatment the subject is highly significant. To prevent the spread of the disease inside the lung or to other persons is the ideal treatment. The only method of absolute prevention would be obstruction of the outlet of the developing cavity. In a motionless lung the discharge of softening con-

tents of a new cavity is not likely. Proper pneumothorax will tend to prevent escape of the contents but improper pneumothorax (with positive pressure) might result in expulsion of the semiliquid, bacilli-rich mass and aspiration into healthy parts of the lung.

(From Pathology to Epidemiology in Tuberculosis, Esmond R. Long, M. D., Journal of the American Medical Association, May 25, 1935.)

#### AN APPRECIATION

The enclosed clipping which appeared in a recent issue of THE MAURY DEMOCRAT (Columbia, Tenn.) should prove of much interest to the older members of the Mississippi State Medical Association.

In a personal letter Dr. Gant says, "I am now in my eighty-fourth year and enjoying good general health, but I am very deaf and my eyes are beginning to fail me."

I am sure Dr. Gant will appreciate an occasional note from some of his old friends back in Mississippi.

"Man a Week—Do we always appreciate the qualities and achievements of the citizens around us, or is it human nature to accept the adage, 'a man is not without honor, save in his own country.' Columbia has many citizens worthy of space in 'Who's Who'. This is the first of a series of thumb-nail sketches, without any attempt at biographical adequacy. Space forbids. The initial subject is Dr. H. A. Gant, whom acquaintances will admit is a worthy one. A man of character, letters and professional achievement. How many of us know that he risked his own life to fight the yellow fever epidemic and distinguished himself with the medical authorities of the Government for highly meritorious service. Typical of the self-sacrifice of the beloved Doctor, he relegated self in his zeal to save the lives of others when the dread malady had reached alarming proportions. His record is enscrolled in the nation's archives. Modest and retiring, yet he is a man from whom you can learn something. He has been a discriminating reader, is conversant with current events, spiritually-minded, dependable, interesting, intelligent, charitable, considerate and venerable without being old. Not every community has a Dr. Gant. Let's appreciate our sterling men, if not emulate them. Of such is a community's backbone made."

#### DRS. GAMBLE BROS. & MONTGOMERY

The Clinic of Gamble Bros. & Montgomery has announced to the medical profession that it has installed a modern shock proof deep therapy roentgen ray equipment.



This, with its present supply of radium, and its ample facilities for surgery and clinical investigation, enables the clinic to treat cancer and allied diseases in accordance with the most modern developments.

In this endeavor it follows the recommendations of the American College of Surgeons governing tumor clinics.

The radiological work will be under the direct supervision of Dr. J. A. Beals.

The clinic also desires to state that it has recently installed the latest model Pavaex machine for the treatment of circulatory disturbances of the extremities.

#### BENEFITS OF SURGERY

The following answers were received to a follow-up questionnaire sent to all female patients whom pelvic surgery had been performed in a Mississippi hospital:

Do you consider yourself improved? "Yessir"  
Have you gained weight? "Yessir I have I waight 10048."

Do you suffer from any abdominal pain? "I have a slait pain in my right side."

Do you still menstruate? "no sir."

Is there any pain associated with menstruation? "I ant menstruation."

Do you have leukorrhea or vaginal discharge? "no sir I dont."

How much? "Have non."

Further information as to present condition: "I keep with the dizzle headach all the time."

#### ISSAQUENA-SHARKEY-WARREN COUNTIES MEDICAL SOCIETY

The regular monthly meeting of the Issaquena-Sharkey-Warren Counties Medical Society was held at the Elks Club, Vicksburg, Tuesday, August 13, beginning with a supper at 7 P. M.

Dr. F. Michael Smith, president, presided and 17 members and three guests were in attendance.

The scientific program included the following:

1. Undulant Fever—Dr. John G. Archer, Greenville.

Discussed by Drs. L. J. Clark, P. S. Herring, B. B. Martin, Jr., F. M. Smith, and A. Street. Dr. Archer closed.

2. Mass Antileuetic Treatment with Mapharsen.—Drs. G. W. Gaines and H. S. Provine, Tallulah, Louisiana.

Discussed by Drs. T. P. Sparks, Jr., B. B. Martin, Jr., G. M. Street, and P. S. Herring. Dr. Provine closed.

3. Malaria (motion picture).—Courtesy of The Winthrop Chemical Company, Inc., New York. Shown by Dr. W. E. Johnston, Vicksburg.

Dr. B. B. Martin, Jr., Vicksburg, was elected to membership.

The next meeting of the society will be held on September 10 at the Elks Club, Vicksburg. The subject will be general surgery and the committee in charge consists of Drs. W. H. Parsons, Vicksburg; J. A. K. Birchett, Jr., Vicksburg; M. J. Few, Rolling Fork, and B. B. Martin, Vicksburg. The program includes the following:

1. Essential points in Successful Spinal Analgesia.—Dr. George F. Carrol, Biloxi.

2. Thyroidectomy.—Dr. J. A. K. Birchett, Jr.

3. Surgery in Relation to Pediatrics.—Dr. W. H. Parsons.

The October meeting will be devoted to roentgenology.

The November meeting will have as a general subject Rheumatic Heart Disease. The committee in charge, Drs. W. K. Purks, Vicksburg; L. J. Clark, Vicksburg; W. E. Johnston, Vicksburg; H. S. Goodman, Cary; and W. H. Scudder, Mayersville, have arranged a program to include the following:

1. A Comparison of the Gross Anatomical Changes of Rheumatic Heart Disease With Those Found in Other Forms of Heart Disease.—Dr. R. H. Potts, New Orleans.

2. The General Management of Rheumatic Heart Disease.—Dr. L. J. Clark.

3. Some Special Problems of the Diagnosis and Treatment of Rheumatic Heart Disease.—Dr. W. K. Purks.

#### WINONA DISTRICT MEDICAL SOCIETY

The Winona District Medical Society met in Grenada, July 30, at 3 o'clock, with a good attendance. A very interesting program was heard. Program was as follows:

Headaches—Dr. Sam Caruthers, Grenada.

Malaria—Dr. R. B. Ray, Kosciusko.

Common Food Allergy—Dr. J. C. Pegues, Greenville.

After the program, case reports were given and business of the Society was transacted. Dinner was served the doctors and their wives at 6 o'clock.

J. K. Avent

#### COAHOMA COUNTY

The postgraduate course in obstetrics, given by Dr. Lapham, has continued during July and we find Dr. Lapham is giving us a mighty good course and he presents it to us in a most effective and interesting manner. In spite of the hot weather (and it has been hot as h—— lately) we have had a mighty good attendance both from Coahoma and adjoining counties. We all regret very much that the course will soon be over in

this vicinity and we wish to heartily admonish our brother physicians in the territory where Dr. Lapham is going next not to miss any of his course.

Dr. E. LeRoy Wilkins and family recently enjoyed a pleasant motor trip up through Tennessee and Kentucky, visiting Memphis, Nashville, Mammoth Cave, and other points of interest.

Dr. T. G. Hughes is convalescing rapidly and nicely from his recent accident and we are happy to know that he will soon be back on the job as active as ever.

Dr. E. L. Rawles of Sherard is having a very enjoyable vacation, apparently, as his wife is spending the summer in North Carolina and has left Dr. Rawles to look out for himself. He seems to be doing it in a very able manner.

We regret very much to report the serious illness of Dr. J. R. Lockhart, of Sherard, who has gone to Greenville to stay with his daughter.

Dr. D. H. Raney's wife recently spent several days with her parents in Meridian.

N. C. Knight.

#### DESOTO COUNTY

Funeral services for Dr. D. T. Hall of Saulsbury, Tenn., who died of a heart ailment in Saulsbury, were held in Hernando.

Dr. Hall, who was 47 years old, was born in Hernando. He received his education at the University of Mississippi and the University of Virginia, afterward practicing medicine in Nashville, Tenn., and Raymond, Miss., before going to Saulsbury, Tenn.

He is survived by his wife and daughter, and a brother, Dr. John E. Hall, Miami, Fla.

Dr. A. V. Richmond of Lake Cormorant carried his nephew and namesake, Albert Vernon Shannon, to a Memphis hospital recently for an operation. The operation was successful and the young man has returned home and resumed his work.

Dr. R. S. Ingram, R. F. D., Byhalia, this county, died recently. Dr. Ingram was a graduate of the old A. & M. College about 1890 and of the old Memphis Hospital Medical College some 10 years later. He has not practiced any in 30 years. A very worthy man indeed.

The inimitable Mark Twain said that "there was more talk about the weather and less done about it than anything else". Is it not hot is often heard these days!

L. L. Minor.

#### ISSAQUENA COUNTY

Month after month our chief editor, Dr. Lippincott, has reminded the county editors that it was time to send in their monthly reports. Among the class of other negligent subs it is shown that I have not sent in any medical news from my county this year. Each month I earnestly resolve not to

be delinquent again, but when the time rolls around for the next month's report I am again delinquent.

I might offer the excuse that we only have three doctors in my county, and one of these has been in a hospital for several months. The other two of us are but ordinary fellows who are too poor to afford the expense of even the shortest vacation trip.

These two of us, just left over from better times, can never afford to take a trip of pleasure or recreation because we haven't the price. We do not relish this, but we cannot help it. We must be poorer than the others doctors of Mississippi. We are "it," not our county.

Being in a position to appreciate a good thing, especially from an economical standpoint, we are very much pleased with the course of lectures being given in our section by Dr. Lapham under the auspices of the State Medical Association. Dr. Lapham is competent and intensely practical. Our doctors are deriving very much benefit from his lectures. We endorse the plan. It is a great boon to the ordinary country practitioner. We hope the plan will be continued.

W. H. Scudder.

#### LAFAYETTE COUNTY

Dr. and Mrs. A. H. Little, Oxford, and Dr. and Mrs. H. P. Boswell, New Albany, have returned from Saluda, North Carolina, where they have been attending the Southern Pediatric Seminar.

Dr. E. S. Guyton recently made a trip to Chicago in the interest of the University of Mississippi School of Medicine.

Dr. Eugene Venable Bramlett has recently located in Oxford. He will do general practice with a primary interest in urology.

Dr. and Mrs. J. C. Culley are visiting in New York City.

During July Dr. J. R. Simms, Jr., was in New York City studying and visiting clinics.

For the year 1935-36 the University of Mississippi School of Medicine will not enroll a freshman class, and during the year efforts will be directed towards a reorganization of the medical school.

J. R. Simms, Jr.

#### LEFLORE COUNTY

Dr. Felix Underwood, Jackson, spent Sunday, July 7, in the home of Dr. and Mrs. B. B. Harper, Itta Bena.

Dr. Theodore R. Austin, Rochester, N. Y., was in Greenwood, July 11, to spend a few days with his mother, at her home here.

Dr. and Mrs. Z. T. Scott, Austin, Texas, visited in the home of Mrs. P. W. Kimbrough, Itta Bena, a few days in the middle of July.

Dr. L. A. Barnett, Greenwood, spent July 17 in St. Louis, Mo., on business.

Dr. Victor E. Fox, Tomnolen, brought a patient

to Greenwood Leflore Hospital on July 20.

Dr. and Mrs. F. M. Sandifer, Greenwood, announce the engagement of their daughter, Louise Neilson, to Mr. William Claude Hicks, Inverness, the wedding to take place in the fall. Miss Louise is a graduate of the University of Mississippi and Mr. Hicks is a cotton buyer.

Mrs. Mattie Yates, Philadelphia, 73, died in Greenwood at the home of her daughter, Mrs. Pearce, August 2, and was buried at Philadelphia, Saturday, August 3. She was the mother of Drs. R. B. and E. P. Yates of this place, Dr. Claude Yates of Philadelphia, and Dr. Guy Yates, Itta Bena.

Mrs. G. H. Wood, Jr. and her son, "GH," III, after spending a few weeks in the home of her parents, Mr. and Mrs. Harris Gray, Greenwood, has returned to her home in Big Springs, Texas, to join her husband, Dr. G. H. Wood, Jr., who has been away, visiting clinics in the north.

W. B. Dickins.

#### MONROE COUNTY

The weather is almost unbearably hot and has been for three weeks. Politics is hot too. Personally I have not mixed the two. But it seems that the double heat wave was too much for my doctors last night; for they did not show up for our monthly medical meeting. So I have no society news to send—except that our meeting will be *next Monday* night—just one week late.

In my last communication, I stated that two of my doctors were in the hospital. I am happy to tell that they are out and much better. Dr. McCown, who was seriously ill, has been at his office some ten days but is still taking things easy.

The next quarterly meeting of the Thirteen-Counties Society is scheduled for the 17th of September and will be at Greenwood Springs. This is Monroe County's meeting—a meeting for which I am willing to stand sponsor. But every other member of this great society is behind the meeting. It will be a success. All our meetings throughout the district are successes. Be sure to attend this meeting at Greenwood Springs. Fine water, genuine country hospitality, a good lunch at noon and a worthwhile scientific program will be awaiting all who come.

An unexpected pop-call visit from Dr. Dye, recently, gave me much pleasure. Dr. Earl Green of Wiggins, also, dropped in for a short call. He married one of our most beautiful and popular girls. She had dedicated her sweet young life to teaching school. But she fell from her first estate into the state of "matrimony". How natural and romantic!

Monroe county is one of the large counties of the state. The section of the county west of the Tom Bigbee River, is mostly prairie land and was once the finest farming section of the state. It

was (and is) divided into large plantation tracts. It was formerly owned by pioneer families and cultivated by slave labor. After the slaves were freed it was cultivated by negro tenants. It is heart-rending to see the change that has come over this beautiful section. The land is gullied and worn. It is overgrown with Johnson grass and other noxious weeds. The negroes have, like the Arabs, folded their tents and silently stolen away. Most of the land is held by insurance companies and other such lending organizations. I wonder what is to be the fate of the one time owners? And I wonder what the future holds for this large and once great body of land? On the east side of the river no very large plantations are found,—small farms owned and cultivated by white people. As fine a type of people as can be found alive. But they have been hit hard by the depression. Many of these owed debts that have been galling and hard to meet. But 12 cent cotton has helped some. Things looked brighter, but a six week drought has darkened the picture somewhat.

What of the future of medicine? That question comes home to my readers. None of us have starved—our heads are bloody but not bowed.

I protest against the discrimination of the government against us. I regret the necessity for the dole. But without it, revolution, arson and bloodshed were inevitable. Since the government has adopted the indigent, it (the government) should care for all their wants. Why should we, alone, take cut prices? If we should refuse, I feel certain that full prices would be paid. No danger of running men into the state or states to work for small wages. Men have to hold license to practice medicine. What have we a licensing board for? If our local men who are inclined to "scab" are given to know that their action brings disgrace in the sight of other doctors, I think they will hesitate and even refuse to sell out. If we will stand shoulder to shoulder we will win this fight. Contract practice (a blot on our escutcheon) and state medicine will both fade away. If a square deal can be had for labor and fair prices for products of labor can be procured, doctors will give the people ample medical care and the people will pay us for our service. Friends, in my thinking, the matter is, largely, up to us. Organize, fraternize, be true to ourselves.

G. S. Bryan.

#### PEARL RIVER COUNTY

Everything is fairly quiet in the free state of Pearl River except politics. There is little else of interest just now. Tomorrow will be a welcome day to many since the number of candidates will be reduced and working men will have an opportunity to do something.

The physicians of the county have had a good



deal of malaria to deal with during the past month. More malaria is being reported than anything else in the way of physical ailments. One of our physicians, Dr. N. W. Fountain, is just recovering from an attack. Dr. Fred Horne has also been on the sick list. His trouble seems to have been due to overwork. This has necessitated his taking a rest. We are hoping that he will soon be able to return to his practice.

We are expecting to have Dr. Hickerson with us next week for a series of chest clinics. We are hoping to find any cases of tuberculosis that we may have in the earlier stages when it will be amenable to treatment. We are anxious for our physicians to report suspected cases early in order that something may be done for them at such time.

G. E. Godman.

#### PONTOTOC COUNTY

The many friends of Dr. J. W. Turner, Pontotoc, will regret to hear of his wife's death that occurred July 13, at her home here.

Dr. E. B. Burns, Ecru, has just returned from his vacation on the coast.

Dr. O. F. Carr, Pontotoc, is one of the busiest men in the county just now, looking after Hugh White's interest.

Dr. I. P. Carr, Clarksdale, attended the funeral of his brother, R. T. Carr of this city, on July 19. We extend sympathy to Drs. O. F. and I. P. Carr and families in the death of their brother.

Pontotoc was selected as the meeting place of the 26 county registrars and health officers of Northeast Mississippi. They met July 3 with a splendid attendance. Dr. Felix J. Underwood and Dr. R. N. Whitfield, Jackson, had charge of the meeting. R. P. Donaldson.

#### SUNFLOWER COUNTY

Many of the physicians of Sunflower County are attending the lecture course in obstetrics, being conducted by Dr. M. E. Lampham. Some of the doctors go to Cleveland for the lecture Tuesday afternoon and others go to Greenville for the lecture Wednesday night.

Through the efforts of the physicians of the county a diagnostic laboratory was added to the County Health Department. This laboratory is located in Moorhead and is operated by Mr. E. C. Gillis, who for many years was in charge of the laboratory of the Vicksburg Infirmary.

During the latter part of the month Dr. W. D. Hickerson of the State Sanatorium conducted a tuberculosis diagnostic clinic in the Health Department offices at Indianola and Ruleville. Only those cases were examined that were referred to the clinic by physicians. Several active cases of tuberculosis were found that would not have been diagnosed without the aid of roentgenograms.

Dr. Alberto Leon of Mexico City was a visitor to the county during the last few days of July. Dr. Leon is studying health conditions in the United States. He has completed a year's study at Harvard University and after a second year's study there plans to resume health work in Mexico.

Dr. B. H. Higdon, Sunflower, has returned from an enjoyable vacation spent in North Carolina.

Dr. and Mrs. J. A. Alexander, Indianola, motored to points in South Mississippi during the month to visit relatives and friends.

The county is grieved over the death of one of its well known physicians, Dr. J. R. Richardson.

Dr. C. C. Smith has been transferred to Holmes County as acting health officer for the summer. He will go to Johns Hopkins University this fall for eight months of study in the School of Hygiene and Public Health.

Dr. H. B. Cottrell has returned to Sunflower County as county health officer after having completed a Rockefeller Foundation fellowship at the Johns Hopkins School of Hygiene and Public Health.

Dr. W. J. Lusk, Ruleville, is spending his vacation on a three weeks' tour of the East. He expects to visit in the Carolinas and in New Jersey.

H. B. Cottrell.

#### WARREN COUNTY

Dr. C. L. Simmons, Hazelhurst, was an appreciated visitor to our county this month, and while on his visit here he attended the monthly staff meeting of the Vicksburg Sanitarium.

Tallulah, La., sent from its eminent group of professional men a visitor to our city in the person of Dr. H. S. Provine. In fact, on two occasions during the month, Dr. Provine was a good ambassador from the fraternal ranks of our sister state. On one occasion he attended the staff meeting at the Vicksburg Hospital, and on the other occasion, he attended the staff meeting at the Vicksburg Sanitarium.

Dr. and Mrs. R. A. Street, with her little daughter, took a short vacation this month (July) and spent a few days down on the Gulf Coast, enjoying the monotonous "break" of the wild waves, and the "multitudinous laughter of the sea."

The many friends of Dr. and Mrs. Laurance J. Clark are happy to learn that Mrs. Clark is rapidly recovering from her recent illness which was of severe enough character to require surgery for ultimate recovery.

Dr. J. A. Milne, director of the Field Unit for the State Department of Health, was in our city this month in the discharge of official duties. We are informed that he, with his staff, was evaluating or appraising the work of the Warren County Health Department for the year 1934. No doubt this study will reveal and accentuate in written



form a commendable amount of valuable service rendered by this department. This appraisal, being an authentic accounting, will also show overlooked opportunities and positive errors. Nevertheless, we understand this county health department claims the fidelity, if not the distinction, of having at all times tenaciously held to a practice and service that can be fully evaluated only by public health weights adjusted to the scale of preventive measures that protect the public. It is indeed marvelous to watch the earnestness, carefulness, seriousness and efficiency of the young men of today's scientific training; how they conscientiously endeavor to shape, mould, cut to a given pattern, compress, standardize all men and all services to one image, the idol of a system. We graciously accept it as a fact or fallacy of our times. It seems in this day of "extra-super standardization" that in some systems of appraisal the errors of omission are more grievous than the errors of commission, yet we hope some day when fairly and justly considered by the standards of sane reasoning that we will perceive the truth of the poet's words that "Errors, like straws, upon the surface flow; He who would search for pearls must dive below".

In the preceding paragraph reference was made to pearls. We feel sure every reader fully understands that as used there, pearls typified essentials, fundamentals, etc., and the same may also be equally true when we record that we have been reliably informed that Dr. J. A. K. Birchett, Jr., made a trip during the month to Chicago in search of Pearls and other precious Jewels. It is said that Jason sought the "golden fleece", but that Jack sought the "black pearl in a woman's eye", and stated that "stones of small worth may lie unseen by day, but night itself does the rich gem betray".

A few months ago we left our good friend, the likable and lovable, yet indomitable, Dr. Edley H. Jones, alone on the Gulf Coast of Mississippi, bemoaning "ships that put out to sea" and leave a "wanderlust" traveler stranded on the shore. Then and there that invincible spirit of Dr. Edley's cried out "My limitations are not the seashore. I will yet ride and tame the wild waves of the ocean." So he took a circumventive route over land into Mexico and, obscured and abetted by the omnious shadows of a cloudy, stormy tropical night, he stole upon an ocean liner at Vera Cruz, whose destined port was New Orleans, and when this mighty Leviathan of the deep was well upon its way, it is reported that someone heard the faithful disciple of Aesculapius jubilantly quoting the immortal lines of Lord Byron's *Childe Harold*:

"Once more upon the waters: yet once more!  
And the waves bound beneath me as a steed  
That knows his rider."

Dr. H. T. Ims.

#### WASHINGTON COUNTY

Paul G. Gamble, Jr., bright little son of Dr. and Mrs. Paul Gamble, Greenville, was recently operated upon for appendicitis. Dr. and Mrs. Gamble's many friends are delighted to know this young man has made a complete recovery.

Dr. and Mrs. Paul Gamble recently made a motor tour, visiting various state parks.

The opening of Leroy Percy State Park near Hollandale proved to be quite a success. It was reported there were 10,000 visitors from all sections of the state. A great deal of credit for the success of this event and the park is due Mrs. Paul Gamble who is chairman of the Leroy Percy State Park Commission.

Mrs. Paul Gamble and M. V. B. Davis, Meridian, were recently appointed by Governor Sennett Conner as members of the State Forestry Commission.

Dr. T. L. Dobson, Leland, enjoyed a short stay in Hot Springs, Ark. last month.

Mrs. T. L. Dobson and her mother, Mrs. Hay of Leland, are spending the summer at Manitou, Colo.

Among those who attended the July Horse Show at Drew were Dr. K. L. Witte, Mr. Dean Hebron, Mr. and Mrs. Ed Wood, Charles Wood and Cliff Hood, all of Leland.

Mr. and Mrs. Ira Pegues and Ira, Jr., of Scottsboro, Ala., have returned after a two weeks' visit to Dr. and Mrs. J. C. Pegues, Greenville.

Dr. Maxwell E. Lapham who was here for several days with the County Health Department addressed the Kiwanis Club at its noon luncheon meeting recently.

The members of the Greenville Garden Club held their July meeting at the Leroy Percy Park. Mrs. B. B. Payne, Mrs. Granville Stanley and Mrs. T. B. Lewis were hostesses.

Mrs. John Lucas and Mrs. R. H. Lake, Greenville, were hostesses at luncheon at their home complimenting Mrs. Thos. Holmes, Mrs. T. T. Porch and Mrs. C. W. Wakefield.

A beautiful wedding was solemnized Wednesday night, July 31 at 8 o'clock in the Presbyterian Church when Miss Dorothy Clark Thompson, daughter of Dr. and Mrs. C. P. Thompson, Greenville, and Mr. William Colbert Keady were married in the presence of a large assemblage of relatives and friends with the Rev. John Young officiating. A program of prenuptial music was rendered by Mrs. James Franklin, Jackson, soloist, daughter of Dr. and Mrs. T. B. Lewis, Greenville, and Mr. James Wallace, University, organist.

Dr. and Mrs. R. E. Wilson and children of Greenville enjoyed a most delightful vacation in Fifield, Wis.

Dr. and Mrs. E. T. White, Greenville, spent their vacation in the home of Dr. White's mother in Merigold.

Dr. George F. Archer, who is an interne at the

University of Pennsylvania Hospital, Philadelphia, Pa., paid a visit to his father, Mr. George Archer and uncle Dr. John Archer of Greenville recently.

The many friends of Dr. T. C. Olivier, Leland, are delighted to know of his complete recovery, after his operation at the King's Daughters' Hospital, Greenville.

John G. Archer.

#### WINSTON COUNTY

The handsome brick residence of Dr. and Mrs. E. L. Richardson on South West Main Street, which is under construction is looking fine, the frame work being up and ready for the brick veneering.

Dr. W. W. Parks and his wife spent some time this week at the Neshoba Fair. They report a good time.

The final count in the state on the election is nearing completion, and it seems that White and Johnson will fight the second battle. Murphree having come out third is disappointing to some of our doctors, while others are thrilled at a chance of their choice yet.

Dr. Everett Lovorn of Fearn Spring neighborhood was in the city recently on business.

Dr. H. B. Watkins, Noxapater, our new health officer was in the city looking after a death caused by scarlet fever recently.

The little son of the writer, Marion, Jr., has been confined to bed several weeks with acute nephritis, but we are delighted at some improvement at this time. He was under Drs. Rush and Rush in Rush Infirmary for several days, we appreciate their service and kindness so much to him while there.

M. L. Montgomery.

#### NEWTON INFIRMARY

Dr. M. L. Flynt and sons, Drs. Rogers Mayo and M. L. Jr., of Meridian, have just returned from Dr. Crile's Clinic in Cleveland, Ohio.

Dr. and Mrs. Dudley Stennis visited relatives in DeKalb yesterday.

Mrs. Scottie Kemp has just returned after spending some time in New Orleans studying roentgen ray technic.

Dr. Omar Simmons will leave soon for Chicago, Ill., and Rochester, Minn., where he will take some special study in surgery.

Dr. J. L. Parks of Connehatta and Dr. J. E. Turnage of Lake were recent visitors to the Newton Infirmary.

#### THE WOMAN'S AUXILIARY TO THE MISSISSIPPI STATE MEDICAL ASSOCIATION

President—Mrs. Leon S. Lippincott, Vicksburg.

President-Elect—Mrs. Adna G. Wilde, Jackson.

Secretary—Mrs. H. C. Ricks, Jackson.

Treasurer—Mrs. J. W. D. Dicks, Natchez.

Press and Publicity Chairman—Mrs. Hugh H. Johnston, Vicksburg.

#### THE WOMAN'S AUXILIARY TO THE SOUTH MISSISSIPPI MEDICAL SOCIETY

Dr. and Mrs. R. C. Clark and family spent two delightful weeks in the Ozarks in Arkansas, visiting Dr. Clark's mother.

Dr. and Mrs. W. W. Crawford and Miss Helen Crawford are back home from two weeks' stay in their summer cottage in Hendersonville, N. C.

Dr. and Mrs. C. C. Buchanan had a lovely trip by motor to Columbus, Ohio.

Dr. and Mrs. Carlton Temple and baby, Margaret, are leaving in a few days for a two weeks' stay in Nashville.

Dr. and Mrs. Champenois have enjoyed having their son and daughter at home this summer. Roma Fern will attend the Mississippi Woman's college and Hal the Mississippi State College this fall.

Mrs. H. L. McKinnon and Miss Frances McKinnon will leave soon to visit Dr. Joe McKinnon who is serving his internship at University of Ohio.

We are all congratulating Dr. and Mrs. Lawrence Hudson on the arrival of wee Willetta Ann at the Baptist Hospital in New Orleans, where Dr. Hudson is serving his internship.

Dr. T. E. Ross who has been confined to the hospital is improving.

Dr. and Mrs. Prentiss Smith and Mrs. J. N. Arnold, Mrs. Smith's mother, spent Tuesday in Meridian as guest of Dr. and Mrs. Hubert Arnold.

Dr. and Mrs. J. J. Bethea leave soon for a week's stay in Oklahoma.

Dr. and Mrs. H. C. McLeod and family spent two weeks in Biloxi.

Dr. and Mrs. C. C. Hightower and Elizabeth have spent their week-ends fishing, motoring, and sailing on the Gulf with their son and brother, Charles, who has spent the entire summer cruising along the Coast.

Dr. Leo H. Martin is back from Hot Springs.

Mrs. Martin and Mary will leave soon for two weeks' stay in Alabama.

#### VICKSBURG NOTES

Mrs. Edley Jones and Edley, Jr., are visiting in Canton.

Dr. and Mrs. C. J. Edwards and son spent several days on a fishing trip near New Orleans.

Dr. and Mrs. Guy Jarratt motored to New Orleans for the week-end.

Friends of Mrs. H. S. Goodman of Cary, regret that she continues ill.

Mrs. L. E. Martin of Anguilla is enjoying a visit from her daughter and young grandson.

Mrs. George Street had as her guest, her niece, Miss Towers, of Rome, Georgia.

Mrs. E. F. Howard suffered a broken wrist when she received a fall. Her many friends are sympathizing with her in this misfortune.

Mrs. F. M. Smith is entertaining her sister from Monroe.

Miss Martha Johnston, daughter of Dr. and

Mrs. S. W. Johnston, has returned from school at Duke University, in Durham, N. C.

Mrs. Preston Herring's father, Rev. J. C. Greenoe, made a short visit here.

Dr. and Mrs. Purks are located in their new apartment on Chambers Street.

Miss Margaret Pettit, daughter of Dr. and Mrs. D. A. Pettit, has returned from a delightful visit in several cities in Texas.

#### HONOR ROLL

Your editors are grateful to the following for aid in furnishing material for the Mississippi Section of our Journal this month:

COUNTY EDITORS: N. C. Knight, L. L. Minor, W. H. Scudder, J. R. Simms, Jr., W. B. Dickens, G. S. Bryan, G. E. Godman, R. P. Donaldson, H. B. Cottrell, H. T. Ims, John G. Archer, M. L. Montgomery.—12.

MEDICAL SOCIETIES: Issaquena-Sharkey-Warren Counties; Winona District, J. K. Avent.—2.

HOSPITALS: Newton Infirmary, Vicksburg Sanitarium.—2.

WOMAN'S AUXILIARY: Mrs. Hugh H. Johnston, Mrs. L. J. Clark, Mrs. Ernest Bethea.—3.

OTHERS: T. M. Dye, J. P. Wall.—2.

TOTAL 21.

## BOOK REVIEWS

*Body Mechanics in the Study and Treatment of Disease:* By Joel E. Goldthwait, M. D., LL. D. Lloyd T. Brown, M. D., Loring T. Swaim, M. D., and John G. Kuhns, M. D. Philadelphia. J. B. Lippincott Co., 1934. pp. 281.

This volume is an elaboration of the postulates laid down by Goldthwait since the early part of this century. It is clearly written and is convincing. The authors realize that most medical men are trained in the treatment of acute diseases but have given little thought to the care of the chronic patient. Here they attempt to present in an interesting manner the basis for the proper understanding of numerous chronic disorders that are amenable to at least some relief.

The opening chapters deal with the anatomical factors constituting good and poor body mechanics, and how these factors influence the organism as a whole. Following these are several chapters dealing with backache, arthritis and diseases of the various body systems. The closing chapters deal with treatment along orthopedic lines, and numerous illustrative cases are presented.

This book should be carefully read by all men doing general medicine and surgery, as it will

give a clearer understanding of the background of many disorders now little understood.

GEORGE C. BATTALORA, M. D.

*Aids to Surgery:* By Cecil A. Joll, M. S., M. D., B. Sc., F. R. C. S. and Reginald C. B. Ledlie, M. B., B. S., F. R. C. S. Baltimore. William Wood and Company, 1935

Through terse expression of subject matter and employment of a compact form in the arrangement of this small volume, the authors and the publishers have combined to make this revised synopsis of surgery quite complete. Although in vade mecum form, the book contains much of the essential material found in many larger and more wordy general treatises on surgery.

Because of the limitation necessarily imposed in the preparation of any compend, controversial subjects are at times presented rather dogmatically and in some instances where alternate methods of management are available, the authors have presented only that one which is most generally accepted or the one which they consider best. A remarkable amount of descriptive material and many helpful and practical observations are pre-



sented in a very concise manner. The index is quite complete and well arranged.

AMBROSE STORCK, M. D.

*Surgical Pathology of the Peritoneum.* By Arthur E. Hertzler, M. D. Philadelphia. J. B. Lippincott Company, 1935.

This most recent addition to the author's series of monographs on surgical pathology has been long anticipated. Similar to his previous publications this compendium is undeniably stamped with the authenticity accomplished only by years of sedulous application and close observation of "living pathology." Written in the author's characteristically pleasant style, emphatic in its honesty of purpose, refreshing in its almost vernacular bluntness, and conspicuous by its lucidity of thought, its reading is not only enlightening, but enjoyable as well. Undoubtedly there will be some that may take exception to some of his views which may apparently border upon dogmatism. This is in all probability the result of the author's enthusiastic attempt to dispel the older, shadowy empirical views by the newer laboratory lights.

His first consideration is a succinct, but thorough account of the anatomy, physiology, and healing of the peritoneum. These chapters serve the introductory purpose of permitting a clearer insight and better comprehension of peritoneal adhesions. The author rightfully emphasizes the importance of distinguishing between anomalous peritoneal folds which produce no disturbance during life and which are so frequently culpably denounced by the operator and the true permanent adhesion indicative of previous disease. These harmless prenatal "adhesions" which are simply union of folds that form during embryonal development are not to be confused with the permanent adhesion subsequent to infection. He woefully laments the general misconception that adhesions are an inimical something to be "broken up" whenever and wherever they are found. His excellent dissertation on peritoneal adhesions is alone sufficient for the welcome acceptance of the book.

The remainder of the book is concerned with the various aspects of peritonitis, diseases of the omentum, and tumors of the peritoneum, mesentery, and retroperitoneal spaces. The conditions described are profusely illustrated with drawings and photographs of unusual merit. The book is happily recommended as a compendious and critical presentation of the subject, colored by the author's stimulating views.

MICHAEL DEBAKEY, M. D.

*The Patient and the Weather:* By W. F. Peterson, M. D. v. 2. Ann Arbor, Mich. Edwards Bros., Inc. 1934. pp. 530.

This is volume 2 of a study being published in retrograde fashion. Volume 3 appeared first and was reviewed in this Journal. A review of this most interesting subject is fraught with many difficulties. The most disconcerting admission that the reviewer must make is his inability critically to evaluate the contents of this study. For centuries isolated physicians have on occasion discussed the influence that weather has upon the patient. As a matter of fact, the author introduces us to his thesis by copious quotations from Hippocrates and on several occasions when he feels he has satisfactorily proven a point in question, he refers to Our Father. This is however, I believe, the first comprehensive scientific attempt to discuss this matter.

In this volume the author deals with the influence of the environment upon the patient. After discussing several important components of the environment, he comes to what he considers the most important, namely the meteorological. He fully explains the patient and the weather. Concerning the patient he states that there has occurred an autonomic disturbance or disintegration. The nervous system, the chemistry, the physicochemistry and the endocrine have been disturbed. This autonomic dysfunction is expressed clinically in various ways. In the reaction of the patient to his changing meteorological environment, has adaptations become inadequate and this inadequacy is to be traced to the inability of the autonomic nervous system to function properly. In the daily life of the individual there is a constant swing of the pendulum from the zone of perfect function to the zone of clinically symptomatic dysfunction, or disease. This adaptability varies in all individuals but in many instances it appears to be hereditary or common to several members of a family group.

The author deals at great with meteorological changes. The barometric changes assume great importance and temperature variations are significant. He shows that the patient's symptomatology is initiated or changed in character by polar infalls; barometric crests, etc.

These meteorological changes cause shifts in the patient's body toward alkalosis or acidosis and so the equilibrium is disturbed and symptoms are noted. In this volume the author presents a group of psychically abnormal individuals to prove his thesis. He deals with cases of migraine, neuroses, epilepsy, eclampsia, mucus colitis, gastric ulcer, tooth infections, etc., and presents rather detailed accounts of the chemical and physical changes occasioned by the weather. It would appear that the different constitutional types of individuals react differently to their meteorological environment. The poorly buffered leptosome probably gets off



somewhat worse in his life tussle that does the pyknic individual. The different seasons of the year influence the chemical equilibrium. The reviewer believes he has read the author aright when he states that the onset of symptoms in disease is directly traceable to vascular spasm and anoxemia. In fact, to quote the author,—"Dysfunction and inadequacy of the mechanism which has to do with oxygen supply, is probably the fundamental cause of all disease. Upon this as a foundation, arise the infections and organic changes known to the clinicians as disease."

A great deal of work must still be done in this most romantic field before its full value can be reckoned. Many investigators must contribute to this most important subject before it can be properly evaluated. The author has not presented a sufficient number of cases to make his thesis of great scientific value. It would appear, however, that he has done some splendid pioneering in a department of medicine that holds out the future promise of a great advance in the prevention and treatment of disease. The study is worthy of the consideration of all serious students of medicine. Its real worth remains yet to be proven. The reviewer feels that he has discussed the book in a very fragmentary and roundabout fashion, and he would advise those interested to read it and judge it for themselves.

I. L. ROBBINS, M. D.

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*A Text Book of Biochemistry:* Edited by Benjamin Harrow, Ph. D. and Carl P. Sherwin, M. D. Sc. D. Dr. P. H. Philadelphia and London. W. B. Saunders Co., 1935 pp. 797. Price \$6.00.

The rapid growth of biochemistry at the present time makes it practically impossible for one author to write a text book covering the whole field. For this reason the publishers have selected a large group of specialists to write chapters upon selected topics. Chapters upon Immunochemistry and the Chemistry of bacteria and on other material not usually found in the text books on Biochemistry, are included. The volume is very essential to the advanced student, teacher and research worker, and is a most valuable addition to the library of any one interested in the subject of biochemistry.

As text book for medical students, however, its possibilities are very limited. This type of student needs to have the fundamental facts presented to him in order that they may give him a working knowledge of the subject. The discussions in the various chapters are very advanced and difficult, and in many cases, unnecessary, for the medical student. The text should be recommended as a reference rather than as a text book.

H. H. BEARD.....

*Principles and Practice of Urology:* By Frank Hinman, A. B., M. D. Philadelphia. W. B. Saunders Co., 1935. pp. 1111. Price \$10.00.

For some time there has been a need for a new volume textbook on urology that would present to the medical student and the general practitioner the principles upon which modern urology is founded and offer to him some solution of his problems. This void has been made more acute by the new and rather rapid developments in such fields as transurethral resection of the prostate gland, along with a conspicuous absence of such material in the available textbooks.

This Urology can be recommended with the greatest praise as being the most complete work of its kind, the most comprehensive, and as being the ideal text and reference book for the student and general practitioner.

The sections under the heading of the Clinical Principles of Urology are valuable in emphasizing and evaluating the various data obtained in the taking of a careful history and the performance of a physical examination. The presumptive findings and the positive findings are differentiated and the relative values of both are discussed.

The sections dealing with urinary tract obstruction and stasis are filled with a condensed form of the wealth of investigative material that the author has given to the literature on the subject.

The book is to be highly recommended and considered as a masterpiece in its field.

CHAS D. EHLERT, M. D.

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*Diseases of the Rectum and Colon and Their Surgical Treatment:* By J. P. Lockhart-Mummery, F. R. C. S. Baltimore. William Wood and Co., 1934. 2nd edition. pp. 605.

During the eleven year interval between the appearance of the first and this the second edition of *Diseases of the Rectum and Colon* by Lockhart-Mummery, many additions have been made to our knowledge of diseases of the rectum and colon and some progress has afforded us a better insight into the methods of managing the different surgical lesions. To bridge this gap the author has made numerous changes and a very thorough revision.

The value of this volume lies in the fact that it is the voice of an author with a considerable experience extending over a very important period in the development of surgery of the large bowel. His opinion and methods are to be respected and herein they are recorded in a very readable style. There is not as much evidence of deep research of literature and laboratory as we find in another recently published volume on this same subject. However, the subject is completely covered.

The chapters on cancer of the rectum are excellent. He decries the use of radium in the treatment of any type but inoperable cancer of the rec-

tum but prefers it to excision in squamous cell carcinoma of the anal margin.

A new feature is some illustrations of operations in which the stages are shown by retouched photographs.

HOWARD R. MAHORNER, M. D.

*1000 Questions and Answers on T. B.:* By Fred H. Heise, M. D., New York. Journal of the Outdoor Life, 1935, pp. 232. Price, 75 cents.

For more than twenty years Dr. Fred H. Heise of Trudeau has been answering questions about tuberculosis sent to the Question Box Department of the Journal of Outdoor Life. Dr. Heise selected one thousand of the most frequent and important inquiries and has answered them in this single volume, so that it may be used as a ready reference for the tuberculous patient, his family, and his friends.

The questions are grouped under sixteen appropriate headings. They are answered simply but scientifically. The value of the book is greatly enhanced by an extensive index.

As stated in the introduction the book is not designed to replace the advice of a physician but rather to supplement it.

This small volume can be recommended to patients because of its simplicity, authenticity, and other desirable features.

C. C. DAUER, M. D.

*Child Psychology:* By Leo Kanner, M. D., with a preface by Adolf Meyer, M. D., & Edwards A. Park, M. D. Springfield, Ill. Charles C. Thomas Co., 1935. pp. 527. Price, \$6.00.

This is the best and most detailed child psychiatry the reviewer has ever read. It is clear and concise and gives definite solutions to many of the problems that confront the pediatrician daily.

One of the main points stressed in treating the child and his problems, is the fact that the doctor must understand the child's personality and environment in its entirety. In fact the author begs us to analyse our little patients' problems from all angles,—physical and mental. This includes the difficult problem of complete cooperation on the part of the parents. When we are able to get the confidence and the aid of the parents, our problem is partially solved, for a great part of the child's difficulty is due to its environment and many times to a misunderstanding parent. It takes a very tactful doctor to make an anxious parent believe he is the seat of his child's trouble.

The book is divided into two main sections: the basic principles of child psychiatry and the personality difficulties. These sections are in turn subdivided into chapters dealing with every phase of the problem as it affects each system of the body.

There is no doubt that this book will become an invaluable aid to the pediatrician and those dealing with children. It is too scientific and detailed to be used by the lay public, whose attention has been called to it by a review in the weekly magazine Time.

SUZANNE SCHAEFER, M. D.

*The Harvey Lectures, 1933-34, Series XXIX.* Baltimore. The Williams & Wilkins Company, 1935. pp. 262.

The lectures delivered before the Harvey Society and published in book form every year or two comprise medical literature of the greatest importance. These lectures are delivered by men from various parts of the world who have within recent years distinguished themselves by some outstanding investigations. The Harvey Society, as its name would indicate, is principally interested in physiology but throughout its history it has given the broadest interpretation to the term physiology.

The lectures under review are eight in number and cover an amazing range of subjects. The first is "Typhus and Rocky Mountain Spotted Fever in the United States," by R. E. Dyer. The lecture is a timely summary of knowledge concerning this disease which is being studied intensively and effectively in several centers of the world. The second lecture is "The Potential Energies of Oxidation-Reduction Systems and Their Biochemical Significance," by W. Mansfield Clark. Dr. Clark's subject is exceedingly technical. His approach involves much mathematics and physical chemistry. The third lecture, "Heteroplastic Grafting in Embryology," by Ross G. Harrison, is entirely embryological but of great interest to anyone with deep interest in biology. The fourth paper is on "The Estrogenic Substances," by E. A. Doisy, who has limited himself largely to the chemical phases of this subject, which is his own field, and includes a minimum of physiological and clinical data. The fifth lecture is "The Clinical Application of Some Recent Knowledge of the Biliary Tract and of the Pancreas," by Everts A. Graham. Dr. Graham is the only clinician in the group and his subject is naturally of greater interest to clinicians. He discusses the pathogenesis of the strawberry gallbladder and the importance of lymphatic connections between the gallbladder and liver. The next paper is on "The Significance of Morbid Processes in the Fetus," by George L. Streeter, who limits his discussion of embryology to the human and particularly to the field of developmental abnormalities. His data have important bearing upon the nature of heredity. "Filterable Viruses with Particular Reference to Psitticosis" is the title of the seventh lecture, which is by Thomas M. Rivers. His discussion of psitticosis will be of interest to all students of the diseases due to filter-

able viruses whether or not they have any interest in the disease psitticosis. The whole field of the virus diseases is alive with developments to-day and Dr. Rivers is a leading student of this field. In the last lecture, "The Nervous Mechanism of Cardio-Vascular Control," Dr. Detlev W. Bronk summarizes particularly the work which he and his collaborators have done in recent years at the Johnson Foundation in Philadelphia in the field of nerve physiology. It represents a continuation of work which he began with Adrian. His observations on the nervous control of the heart and blood vessels are of extreme importance and will be of interest to clinicians as well as to physiologists.

R. H. TURNER, M. D.

*The Woman Asks the Doctor:* By Emil Novak, M. D., F. A. C. S., Baltimore, Williams and Wilkins Co. 1935. pp. 189. Price, \$1.50.

This interesting little book, written by the leading American student of menstruation and allied subjects, presents the facts of feminine physiology in a clear and vivid manner. It is, of course, written for the lay reader, and, as the author states, is prepared particularly for the average woman, so that anyone who can read at all can easily understand it.

The female reproductive apparatus is described, then the physiology in the light of recent researches is discussed. The topics of puberty, menstruation, sterility, impregnation, endocrinology, menopause, leukorrhoea, and cancer are covered, with a final short chapter on the sex life of women. The book is extremely well written, its expositions are simple and clear, and it answers the various questions which might arise in the mind of a woman in such a manner that it would seem to be very difficult to improve upon it. It can be heartily recommended for the perusal of the lay women for whom it is intended.

E. L. KING, M. D.

*The Principles and Practice of Medicine:* Originally written by the late Sir William Osler, B.T., M.D., F.R.S., Twelfth Edition; Revision by Thomas McCrae, M.D. New York. D. Appleton-Century Company, 1935. pp. 1196.

This classical work continues to be a monument to the learning of Osler and of McCrae whose recent death is greatly lamented. The long list of changes and additions bears witness to the diligence with which the edition has been carried out. As McCrae points out in the new preface, "In the revision of a textbook there is the constant decision to be made as to how much of what is new should displace what is older. There is no difficulty in finding material which may be added but how much of it has permanent value and represents an actual addition to knowledge is not easy

to decide." The editor's judgment has kept the old Osler up to date and abreast of the times.

The reviewer is so whole heartedly in accord with the doctrine Dr. McCrae has laid down in his preface that he cannot refrain from quoting it extensively here: "In these days it is often said that the number of thoroughly trained clinicians is growing less and that internal medicine is being split up more and more into separate compartments with walls of various thickness between them. This tends to emphasize the study of one system without sufficient attention to the patient as an individual made up of many systems. Certainly we should keep before ourselves and our students the need of emphasis on the study of the patient as a whole and as a human being, and all the manifestations of disease as shown in him. Too often the idea is held that a clinician can be made over night, especially with the aid of instruments and laboratory procedures. In saying this the value of the aid from these is not made light of but time and effort and hard work must go to the acquiring of a knowledge of disease and the patient in whom it exists. We can not be Oslers but we can do our best to follow his steps. The physician and student should always make it a rule to learn everything possible about a patient by the use of his own senses and brain. For example, to have a roentgenologist make the diagnosis of fluid in a pleural cavity should cause a clinician to be thoroughly ashamed of himself. As far as possible a textbook of medicine should emphasize the clinical side of disease problems."

May a worthy successor be found to McCrae who will perpetuate Osler's book in which many generations of students have found inspiration and sound teaching.

I. I. LEMANN, M. D.

#### PUBLICATIONS RECEIVED

The MacMillan Company, New York: Living Along with Heart Disease, by Louis Levin, M. D. The C. V. Mosby Company, St. Louis: Diseases of the Thyroid Gland, by Arthur E. Hertzler, M. D. Lea and Febiger, Philadelphia: A Synopsis of Regional Anatomy, by T. B. Johnston, M. B., Ch. B. Paul B. Hoeber, Inc., New York: The Doctor and the Public, by James Peter Warbasse, M. D.

Gallo & Ackerman, Inc., New York: Diet Control, by George E. Anderson, M. D. and Paul C. Eschweiler, M. D.

P. Blakiston's Son & Co., Inc., Philadelphia: Laboratory Diagnosis, by Edwin E. Osgood, M. A., M. D.

W. E. Saunders Co., Philadelphia and London: The American Illustrated Medical Dictionary, by W. A. N. Dorland, A. M., M. D., F. A. C. S.

American Medical Association Press: Annual Reports of the Council on Pharmacy and Chemistry, 1934. New and Nonofficial Remedies, 1935.



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### THE ROLE OF THE UTERINE CERVIX IN FOCAL INFECTIONS\*

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NEW ORLEANS

It is probably universally accepted that infection in the cervix of the uterus produces a variety of local symptoms. First in frequency is leukorrhea, and then follow pelvic pain, disturbance of menstrual function, pains in the limbs, backache, sterility, and general malaise, or a hypometabolic state. That the cervix, when infected, can serve as the focus for such conditions as neuritis, arthritis, inflammation of structures of the eyes, gastric or duodenal ulcers, or gall-bladder disease is subject of debate, with the extremes of opinion so usual to debated medical subjects.

In 1868 Graily Hewitt,<sup>1</sup> of London, wrote that cases coming under his observation showed the neuralgic nature of pain from the cervix because the patient, "had been affected with well-marked neuralgia of the face, of the temples or other parts."

In 1912 Ashton's text,<sup>2</sup> referring to lacerations of the cervix, contains this: "In the course of time the general and nervous systems are affected and the patient loses weight, and finally neurasthenia develops—"

From this it is seen that even some of the older writers were inclined to blame distant disturbances on the cervix.

In 1927 Mayo and Dixon<sup>3</sup> stated that "Rosenow has placed the cervix on a par with the tonsils as a site of infection. However,

the tonsils are probably better able to destroy infection than the cervix is.

A large number of cases in women have been noted in which the disease, such as inflammatory conditions of the eye, rheumatism in a small joint, or urticaria, persisted until finally infection in the cervix was discovered and eradicated."

In 1933 Wiltse<sup>4</sup> in discussing focal infections does not mention the cervix, though he does not list all possible sources of infection as foci.

Young,<sup>5</sup> in 1933, under clinical features, etc. of cervicitis says: "The most constant symptom is leukorrhea, . . . , although it is common to find even in such patients evidence of impaired general health."

The late W. E. Sistrunk reported many cases of inflammation of the eyes, pyelitis and urethritis, neuritis and neuromuscular pains, arthritis, and general ill-health as the result of cervical infections.

In 1934 P. Graffagnino<sup>7</sup> reported experiences similar to those of Sistrunk, including besides, peptic ulcer, cystitis, and endocarditis.

In "Obstetrics and Gynecology," edited by Curtis, Holden, in the chapter on "Lesions of the Cervix" writes in part as follows: "Moench also studied 12 cases of scleritis and episcleritis in women in whom all other possible foci were eradicated without improvement. The cervix was then examined, and definite infection found. The cervical infection was cured and a streptococcus vaccine was made and injected, with resultant improvement or complete recovery in most cases."

C. Jeff Miller<sup>8</sup> says that the work of Sturmdorf, Rosenow, Langtroth, Moench, and others would seem to lend both experimental

\*Read before the Orleans Parish Medical Society, March 25, 1935.

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and clinical proof to the theory that the histology and lymphatic structure of the cervix warrant its consideration as a frequent focus of systemic infection but adds that he is not one of those who accepts this supposition unreservedly but thinks it is folly to deny that in certain cases the sequence of cause and effect is too clear to be overthrown.

These writers form but a small part of the legion who have taken one side or the other of this question since Billings<sup>9</sup> first started the general interest in focal infections in 1913 and 1914. Incidentally, Billings did not mention the cervix uteri in his original consideration of possible foci. The pro and con of the subject may be epitomized by the belief of Sturmdorf, on the one hand, that "the cervical mucosa could be aptly termed the tonsil of the uterus," and, on the other, the statement of Heaney, as quoted by Holden that "The staff at the Presbyterian Hospital of Chicago are pioneers in the field of focal infections. During the past years we have examined a great number of patients with the question in mind as to whether the cervix was the cause of a possible rheumatism, arthritis, or neuritis.

In not a single case have we been able to demonstrate the cervix as a focus of infection except in acute gonorrheal arthritis."

It has not fallen to my lot to relieve neuritis, unless pains in the thighs may be so classified, nor arthritis, except acute gonorrheal, nor to aid my oculist confreres in clearing up eye conditions by eradicating infection from the cervix. Nor have I seen endocarditis or myocarditis which could be ascribed to the cervix as a focus. On the other hand, I have many times relieved such cases as the following two by successfully treating chronic cervicitis.

#### CASE REPORTS

Case No. 1. Mrs. F. H. R., aged 33 years, 2 para (10 yrs. and 6 yrs.) Menses regular, 5 days duration. Complaint: For about 2 years had had frequent prolonged attacks of urticaria and increasing nervousness, and lance-like pains in lower abdomen. Diet and medication, after much laboratory work, had been of no avail. Examination of pelvic organs: Soft and gaping cervix, greatly swollen, with copious viscid discharge. Body of uterus back and to left—myoma about

size of body of uterus forward and to right. Treatment of cervix and administration of soda bromide with unrestricted diet resulted in prompt and complete relief of all symptoms.

Case No. 2. Mrs. L. M., aged 37 years, 4 para (oldest 16 yrs., youngest 7 yrs.). One miscarriage before last child. Regular menses, 3 to 5 days duration. Complaint: Leukorrhea, first white but yellow for last year or more. Indigestion. Pain in upper part of epigastrium, constipation. Examination: Lacerated perineum and severely lacerated soft cervix, with eversion and erosion, much swollen. Abdomen generally tender to palpation. All symptoms relieved by treatment of the cervix and attention to the intestinal stasis.

These cases could be multiplied many times, but they are very typical of those I see who suffer from other than purely local symptoms from cervicitis. I am convinced that the cervix does act as a true focus of infection, though perhaps not very frequently in the production of the common conditions arising from such lesions elsewhere. It seems to me that the positive evidence of those who have successfully handled such cases is much more dependable than the negative evidence of the others. If this is so, and the preponderance of opinion leads to that conclusion, then it gives us another potent reason for urging the eradication of infection from the cervix uteri whenever it is discovered, and the routine examination of the cervix as a possible focus of infection as well as a fertile field for future carcinoma.

The divergence of opinion as to the role of the cervix as a focus of infection is no wider than for the approved method of treating the convicted cervix. You would be bored by even brief reference to the many radically different views. Out of all that have come to my notice and out of my own experience I have formulated a definite system of attack which gives satisfactory results, if followed systematically. Nor do I have any apology to make for the use of the time honored and often ridiculed glycerin tampon.

In the first place, cervices are classified as to consistency, for the hard cervix means fibrous tissue and does not yield very often to the less radical measures, whereas the rapidity with which the soft cervix clears up is often

astonishing. Bacteriological examination should be done in all cases.

In the second place, the patient's general condition must be taken into consideration and her resistance raised as far as possible. Sleep must be secured and additional rest when needed. Vaccination with foreign protein is almost routine and typhoid vaccine appears to give the best results.

Heat is conveyed to the cervix by douches, diathermy, or the Elliott apparatus. My experience with the last two is very limited but very gratifying.

Briefly, then, the cervix is exposed, and silver nitrate 5 per cent or tincture of merthiolate applied. This is followed by a glycerin tampon, which is removed next day by the patient who immediately takes a hot douche. I am aware of the skepticism as to the virtue of douches, but my faith in them as conveyors of heat is not shaken. These treatments, with cervical dilatation with the graduated dilators, are continued as long as improvement is definite. As soon as progress ceases, cauterization with a fine-tip cautery at cherry red heat is done, when the office visits are omitted for two weeks, the patient taking douches at home. Local treatments are then resumed until all effects of the cautery subside—at this time, choice must be made between further cauterization or Elliott apparatus or diathermy. Usually the cervix shows such improvement as to justify second cauterization. Should this, too, fail to completely eradicate the infection there remains electrical conization, Sturmdorf surgical conization, or amputation. It seems to me that electrical conization is bound to completely supplant the Sturmdorf operation as it has all of its advantages and is an office procedure. Amputation, of course, is reserved for those cases which do not yield to the above or in which it is obvious from the outset that nothing else will avail. The consistency of the cervix is often the deciding factor, for the hard cervix with infection seldom yields to the less radical method of attack. It seems to me that the wide-spread use of electric conization even in skilled hands is likely to be overdone or frequently unnecessary, and that we should not

use it as a routine treatment, for cervical infection but should reserve it as a splendid method in cases which do not yield to simpler measures.

To summarize briefly: An attempt has been made to confirm the cervix uteri in the role of a focus of systemic infection, and a systematic plan of attacking this infection has been outlined.

#### REFERENCES

1. Hewitt, Graily: *The Diagnosis, Pathology and Treatment of Diseases of Women*, Lindsay, 1868.
2. Ashton, Wm. Easterly: *A Text-Book on the Practice of Gynecology*, Philadelphia, W. B. Saunders Company, 1912.
3. Mayo, C. H. and Dixon, C. F.: Cervix as a focal and chronic disease. *Collected Papers, Mayo Clinic*, 19: 536-544, 1927.
4. Wiltse, James W.: Chronic focal infection. *Arch. Phys. Therapy*, 15: 210-213, 1934.
5. Young, James: *Text-Book of Gynecology*.
6. Sistrunk, W. E.: A clinical and experimental study of streptococcic vagino-cervicitis and endo-cervicitis. *Southern Surg. Trans.*, 44: 318-323, 1931.
7. Graffagnino, Peter: The chronically diseased cervix as a focus of systemic infection. *N. O. Med. and Surg. Journal*, 87: 83-86, 1934.
8. Miller, C. Jeff: The management of chronic endocervicitis. *Surg., Gyn. and Obst.*, 46: 337-340, 1928.
9. Billings, Frank: Focal infection. *Jour. A. M. A.*, 62: 899-903, 1914.

#### THE ETIOLOGY OF FUNCTIONAL PUBERTY BLEEDING AND ITS TREATMENT BY HORMONAL THERAPY\*

By

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and

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NEW ORLEANS

A rather common and difficult gynecologic problem is functional uterine bleeding at or around puberty. The age incidence of this condition is of paramount importance because of the obvious need of preserving the menstrual and reproductive functions. Functional or idiopathic uterine hemorrhage in women of the menopausal age presents a much easier problem; in them control of the hemorrhage is quickly obtained by a curettage and radium, which brings on the menopause, with

\*Read before the Louisiana State Medical Society, New Orleans, April 29-May 1, 1935.

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subsequent cessation of all menstrual activities.

Functional uterine bleeding in girls of the puberty age demands conservative treatment. When the hemorrhage is sufficiently severe, curettage is indicated to check its immediate flow; however, this procedure is only temporary and recurrences of the same condition are frequent. In order to circumvent the unpleasant features of curettage in young girls, and to eradicate completely the use of radium at this age, treatment of this condition by organotherapy has been advanced. The application of this endocrine treatment to functional uterine hemorrhage in girls, at or around the age of puberty, forms the contents of this contribution.

The cause of functional uterine hemorrhage has been thoroughly investigated here and abroad. Schroeder<sup>1</sup> and Meyer<sup>2</sup> in Germany, Shaw<sup>3</sup> in England, Graves,<sup>4</sup> Fluhman,<sup>5</sup> Novak,<sup>6, 7</sup> Martzloff,<sup>8</sup> and Burch<sup>9, 10</sup> in this country have definitely established the fact that idiopathic uterine bleeding results from a hyperplastic condition of the uterine mucosa, hyperplasia of the endometrium. That this histopathologic change of the endometrium is dependent upon ovarian dysfunction is no longer an hypothesis. It is a certain proof that endometrial hyperplasia is the result of abnormal and persistent ovarian follicular hormone stimulation, in the absence of any corpora lutea influence, and with a possible anterior hypophyseal action in the background. This ovarian hormone dysfunction in turn results from the presence and persistence of the multiple follicle cysts in the ovaries.

Burch<sup>9</sup> has demonstrated comparable changes in the endometrium of mice by the injection of the estrogenic principle while Hofbauer<sup>11</sup>, by implantation of the anterior lobe substances or by injections of the anterior hypophyseal extracts, produced endometrial changes similar to those noted in functional uterine hemorrhage.

The histopathological characteristics of endometrial hyperplasia are extremely distinctive. Grossly the endometrium may be thickened, overgrown or polypoid. The microscopic picture presents hyperplasia of the glandular and stromal elements. Lack of uniformity of the glands, the so-called "Swiss Cheese Pattern,"

is characteristic. Large, dilated, even almost cystic glands are adjacent to small, narrow, non-tortuous ones. The nuclei of the glandular epithelium are heavy and solid. The cellular structures are similar to the epithelial features of the rest or interval phase of the menstrual cycle. The stroma is abundant, dense and compact, with frequent mitoses of these cells. In some sections the glandular elements predominate, while in others the reverse is found, proliferation of the stromal features.

The histological picture of endometrial hyperplasia presents a complete loss of differentiation of the endometrial layers and a similarity of structure to the basal layer of the uterine mucosa. This basal layer takes no part in menstruation and its regeneration is under the stimulus of the ovarian follicular hormone. Therefore, the hypothesis is a logical one that endometrial hyperplasia is an overgrowth of the basal layer of the endometrium at the expense of the superficial layers, whose growth is governed by the hormone of the corpus luteum.

The source and cause of the bleeding in endometrial hyperplasia are still unsettled problems. The degree of the hyperplasia does not always determine the amount or character of the bleeding, since Novak<sup>7</sup> has found similar endometrial changes in women with amenorrhea. Other observers consider small scattered areas of necrobiosis, with localized thromboses, as the source of the hemorrhage. As opposed to this theory, Hartman<sup>12</sup> suggests an active bleeding factor originating in the anterior lobe, while Novak<sup>7</sup> comments upon a possible biological factor which increases the permeability of the uterine vessels and thus permits a massive exodus of blood by diapedesis through a relatively intact surface. He does not believe the massive hemorrhages occasionally seen in this condition can be accounted for by the small necrotic areas in the endometrium. His theory of bleeding is substantiated by Giest<sup>13</sup>, who has shown that endometrial debris is not cast off in the hemorrhage of endometrial hyperplasia as is the case during the ordinary menstrual flow.

The actual cause of the bleeding in hyperplasia of the endometrium is more vague than



the theory of its source. Burch<sup>14</sup> has suggested abnormal and irregular declines in the estrogenic substance as the causative factor. It is apparent that there must be a point at which the amount of the estrogenic principle ceases to be sufficient to maintain the hypertrophied endometrial growth. Such an hypothesis is substantiated by the presence of endometrial hyperplasia associated with amenorrhea, and by uterine bleeding following the withdrawal of the estrogenic principle after the endometrium of spayed rodents has been stimulated by it to an hyperplastic condition. Hence the cause of bleeding in this condition is, in all probabilities, similar to that which determines the onset of the menstrual flow, the withdrawal of the estrogenic stimulation<sup>15</sup>.

Clinically, endometrial hyperplasia manifests itself as uterine hemorrhage, occurring most frequently at the two extremes of woman's functional life, a period when the one-two action of the ovarian hormones is not rhythmic, a fact which offers an explanation that this type of bleeding is really only an exaggerated estrus, or intermenstrual hemorrhage, since ovulation is known to be inhibited. More than 50 per cent of the cases of functional uterine bleeding occur around the menopausal age, although a few cases have been reported subsequent to it, due to granulosa cell tumors.

As noted previously functional uterine bleeding after 40 years of age presents no difficult therapeutic problem, since the bleeding can easily be controlled by curettage and radium. On the other hand, the same condition around the age of puberty is a delicate problem in therapy. The Tulane Gynecological Clinic has experienced rather gratifying results in the treatment of functional puberty bleeding by hormonal therapy<sup>16, 17</sup>. The rationale of hormonal treatment in this condition is, by luteinizing the persistent follicle cysts of the ovaries, to convert the non-secretory, hyperplastic endometrium over into the secretory, pre-gravid or premenstrual type, which is associated normally with menstruation. Progesterone, the corpus luteum factor, is the ovarian hormone controlling this conversion. With its mobilization by the luteinization of the granulosa cells of

the persistent follicle cysts, such an endometrial transformation might be brought about.

Progesterone is the hormone of choice in the treatment of this condition, since its action is directly on the endometrium and need not be routed through the ovary. But progesterone is not available for use commercially, so the luteinizing factor, obtained from the urine of pregnant women, was administered in its place. This hormone, follutein, was generously supplied to us by Dr. J. F. Anderson of E. R. Squibbs & Sons. One cubic centimeter equals 250 R.U.

Recent investigations by Evans<sup>18</sup>, Leonard<sup>19</sup> and Collip<sup>20</sup>, working on hypophysectomized rats, have shown a dissimilarity of action between the hormone found in pregnancy urine and the sex stimulating hormone contained in anterior pituitary extracts or whole gland transplants. In the hypophysectomized rat, the former, the pregnancy urine hormone, gives rise only to thecal cell luteinization around atretic follicles, while the latter causes follicular activation and maturation and the formation of fresh corpora lutea. Evans<sup>18</sup>, however, drew attention to the synergistic action of these two hormones. He showed that the effect on experimental ovaries is much greater than when either is administered alone, and is greater than the additive effect of the two combined. This synergism of the pregnancy urine hormone is demonstrable with either the gonad stimulating principle of the anterior lobe or with the pituitary growth hormone. The factor responsible for this synergistic action has not at present been identified with any of the known pituitary hormones. Evans<sup>18</sup> theorizes on the existence of this factor in the pituitary gland in a prehormonal state. With the action of the pregnancy urine hormone upon it, this prehormonal factor is converted into the anterior lobe sex stimulating principle, which, upon its release, causes the typical Aschheim-Zondek reaction in the ovaries, the production of ripe and ruptured follicles and fresh corpora lutea. If this hypothesis be true, the hormone of pregnancy urine is a pituitary stimulating rather than an ovarian stimulating principle.



In view of the greater ovarian response, as just described, by the administration of the anterior pituitary extract in combination with the hormone of pregnancy urine over the latter alone, this method of therapy was also used in the treatment of functional uterine bleeding. The anterior pituitary principle was given in the form of the anterior lobe growth hormone, also supplied by E. R. Squibbs & Sons.

Granted that no pelvic pathology, as elicited by bimanual examination, could account for the bleeding in these young girls, hormonal therapy was instituted before any curettage was performed. It was desired to take the hormonal estimation in the blood and urine of these patients, but facilities for such a procedure are not yet available. The technique of the treatment consisted in the daily administration to the bleeding patient of 1 c.c. of follutein, alone or in combination with 2 c.c. of the anterior pituitary growth factor. These injections are given intramuscularly and are continued until the bleeding stops. Assuming this cessation of flow to be the end of a menstrual period, no further hormonal therapy is given until the onset of the next period. With the onset of flow, daily injections of the hormone or hormones are again given until the flow of this second period ceases. In like manner treatment is carried through a third period. After treating the patient for three months, no treatment is administered during the fourth period, in the hope that the menstrual rhythm, by this time, has re-established itself. If such is not the case, treatment should be carried on a while longer. In our experience three periods of treatment were usually sufficient to re-establish the normal menstrual rhythm. About equal results were obtained whether follutein was used alone or in combination with the growth principle.

The only untoward symptoms noted were an occasional local reaction at the site of the injections. This unpleasant feature could be somewhat alleviated by lessening the dosage given, starting with smaller doses or by diluting the amount of the injection with an equal volume of sterile normal saline or .5 per cent novocain solution.

That actual conversion of the hyperplastic

endometrium over into the secretory, premenstrual phase did not always occur is readily attested in several cases by the rapid cessation of flow, within 12 to 24 hours, after the injections of the hormones. The smallness of the dose injected and the rapidity with which the bleeding stopped would seem to preclude the above described mechanism. The most likely explanation would seem to be that the hormonal effect is exerted upon some unknown bleeding factor, which possibly is similar in nature and function to the principle which controls the cessation of the normal menstrual flow.

#### CONCLUSION

Hormonal therapy is of definite value in the treatment of functional uterine hemorrhage, due to endometrial hyperplasia, in young girls around the age of puberty. It is the least radical of any of the former methods of treatment, and the results from its administration will be bettered when hormonal preparations are made more pure and potent, and when their actions are better understood. That a tendency to spontaneous readjustment of the functional uterine bleeding in young girls is common is shown in the many milder cases which recover without any treatment. In consequence, some of the acclaimed hormonal cures might have been spontaneous ones.

#### BIBLIOGRAPHY

1. Schroeder, R.: Anatomical study of the normal and pathological physiology of menstruation. *Arch. f. Gynak.* 27:102, 1915.
2. Meyer, R.: Normal and pathological ovulation. *Arch. f. Gynak.* 93:259-315, 1920.
3. Shaw, W.: Irregular uterine hemorrhage. *J. Obst. & Gynec. Brit. Emp.* 36:1-69, 1929.
4. Graves, W. P.: Some observations on the etiology of functional uterine bleeding. *Am. J. Obst. & Gynec.* 20:500, 1930.
5. Fluhman, C. F.: Hyperplasia of the endometrium and the hormones of the anterior hypophysis and the ovaries. *Surg., Gynec. & Obst.* 52:1051-1068, 1931.
6. Novak, E. and Martzloff, K. H.: The etiology of hyperplasia of the endometrium, a clinical and pathological study. *Am. J. Obst. & Gynec.* 8:385-411, 1924.
7. Novak, E. and Hurd, G. B.: The use of the anterior pituitary luteinizing substance in the treatment of functional uterine bleeding. *Am. J. Obst. & Gynec.* 22:501-512, 1931.
8. Martzloff, K. H.: Functional uterine hemorrhage with special reference to hyperplasia of the endometrium. *Northwest Medicine*, 33:263-268, 322-327, 362-369, 1934.
9. Burch, J. C. et al.: Etiology of endometrial hyperplasia. *Surg., Gynec. & Obst.* 53:338-345, 1931.
10. Burch, J. C. et al.: Endometrial hyperplasia. *Arch. Path.* 17:709-826, 1934.
11. Hofbauer, J.: *Surg., Gynec. & Obst.* 52:222- , 1931.

12. Hartman, Flor and Gieling: Am. J. Physiol. 35: 662- , 1930.
13. Giest, S. H.: The morphology of menstrual blood and its diagnostic value. Am. J. Obst. & Gynec. 22:532-542, 1931.
14. Burch, L. E. and Burch, J. C.: Am. J. Obst. & Gynec. 25: 826- , 1933.
15. Witherspoon, J. T.: The interrelationship between ovarian follicle cysts, endometrial hyperplasia and fibromyomata. Surg., Gynec. & Obst. 56:1026-1035, 1933.
16. Witherspoon, J. T.: The treatment of menstrual disorders by the injection of blood from pregnant donors. New Orleans Med. & Surg. J. 86:85-91, 1933-34.
17. Witherspoon, J. T.: The treatment of menstrual disorders by hormonal therapy. New Orleans Med. & Surg. J. 86:659-664, 1933-34.
18. Evans, H. M. et al.: Relation of prolactin to anterior hypophyseal hormones. Am. J. Physiol. 100: 141, 1932.
19. Leonard, S. L.: The nature of the substance causing ovulation in the rabbit. Am. J. Physiol. 98:406, 1931.
20. Collip, J. B.: Production of estrus. J. A. M. A. 101:1553, 1933.

## THE PREVENTION AND CONTROL OF AMEBIASIS\*

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Before it is possible to intelligently consider the subject of the prevention and control of amebiasis it is essential that one have a clear understanding of the meaning of the term "amebiasis," of the life history of *Endamoeba histolytica*; of the incidence and importance of the infection; and of the methods of transmission of this parasite. The following very brief review may help in making clear the discussion which follows as to the prevention and control of this condition.

By the term "amebiasis" is meant the invasion of the tissues of man by the pathogenic ameba, *Endamoeba histolytica*, the invasion occurring primarily through the mucous membrane of the large intestine or, more rarely through that of the lower portion of the ileum or the appendix. The term includes clinically all phases of the infection, from the symptomless "carrier state," in which the only lesions produced are probably microscopic in size, through the stages of indefinite intestinal symptomatology, acute or chronic amebic diarrhea, to the ultimate clinical picture of the condition known as amebic dysentery. It is most impor-

tant to remember that amebic dysentery is but a part of the clinical and pathological picture of amebiasis, and that, in this country, amebic dysentery is comparatively rare while the other conditions produced by *Endamoeba histolytica* are very common. It is also essential that we recognize that "amebic dysentery" is not a disease entity but only one of the clinical conditions brought about by the invasion of the tissues of the human intestine by this parasite.

The incidence of amebiasis in this country is fairly well established for certain regions by numerous surveys made by competent investigators. Surveys have been made in practically every part of the United States and it has been found that the incidence varies with the social classes examined; the age of the individuals examined; whether those examined are in good health or hospital patients; and the general and local sanitary conditions present in the locality where the examinations were conducted. Enough has been accomplished in this line to indicate that approximately 5 to 10 per cent of the people of the United States are infected with *Endamoeba histolytica*, although in some localities the incidence is less than 2 per cent. If we take the total recorded number of individuals examined by competent observers throughout this country, as shown by published surveys, we find that a total of 51,634 individuals have been examined, and that *Endamoeba histolytica* was found present in 5,233, or 10.1 per cent. This number includes those examined in regions where the incidence is very low as well as where it is high, so that these figures are believed to represent a fair average percentage for the general population of this country. This would mean that there are approximately 12,000,000 people in the United States harboring this parasite, and when it is remembered that this is a pathogenic organism which invades the tissues of its host, producing lesions which may result in amebic dysentery or diarrhea, amebic liver abscess, or other serious complications, one is impressed at once with the great public health significance of the problem of amebiasis. Fortunately, in the writer's experience, not more than 50 per cent of infected individuals present symptoms of the infection, al-

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though it should be distinctly understood that even the carrier without any symptoms for months may suddenly develop an abscess of the liver or severe amebic diarrhea or dysentery. As the writer has often stated, there is no such thing as a healthy carrier of *Endamoeba histolytica* if by that term is meant one in whom no lesions are ever produced by the parasite, for, in his opinion, which is supported by a large number of clinical and pathological investigations by numerous observers, every individual harboring this parasite has lesions due to it in the intestine, even though they be microscopic in size. In many individuals these minute lesions heal almost as rapidly as they are produced and symptoms do not result, but if their resistance is lowered for any reason the lesions do not heal as rapidly and, sooner or later, microscopic ulcerations occur and clinical symptoms begin to appear. Thus, it is essential that every known infection with *Endamoeba histolytica* be properly treated as one never knows when serious symptoms may arise or amebic abscess of the liver develop if conditions in the human host become favorable for the rapid multiplication and invasion of the tissues by this parasite.

The life history of *Endamoeba histolytica* is very simple, consisting of a motile, or trophozoite stage, a pre-cystic stage, and a cystic stage of development. The cysts of the parasite are the infective stage as the motile trophozoites can not pass through a normal stomach due to the acidity of the gastric secretion which destroys them. When the cysts of the ameba are swallowed in contaminated food or drink they pass through the stomach unaltered and through the entire small intestine in most instances, but on reaching the large intestine the cyst wall, which has apparently been softened by the intestinal secretions, becomes permeable, and a four-nucleated ameba emerges from each cyst, which afterwards divides into eight young amebas. This encystment occurs usually in the ileo-cecal region but may occur in the lower portion of the ileum or in the appendix. After the young amebas are developed some of them penetrate the mucous membrane of the intestine by virtue of a cytolytic substance

which they excrete, and by their active motility, and multiply as motile or trophozoite forms in the tissues. Others do not penetrate the bowel wall but after living in the lumen of the intestine for a while undergo encystment, the cysts being voided in the feces of the host. If such feces contaminates food or drink, the cysts are swallowed and the cycle of development already described is repeated.

The motile forms of *Endamoeba histolytica* are found in appreciable numbers only in liquid or semi-liquid stools, while the cysts occur only in formed or semi-formed stools, in the vast majority of instances. It is thus evident that the infective stage, or the cyst, is only found when the infected individual is not suffering from diarrhea or dysentery, and that individuals suffering from these conditions, and in whose feces only the motile forms are found, are usually harmless so far as the transmission of the infection is concerned. These facts are of extreme importance in the prophylaxis of the infection, as will be noted later. In the tissues the ameba multiplies by simple fission, each organism dividing into two motile forms, while in the cysts the nucleus divides into four nuclei thus producing the four-nucleated ameba which emerges from the cyst when it reaches a new host, and which eventually divides into eight motile amebas when liberated in the intestine.

The methods of transmission of amebiasis are various but there can be no transmission of this infection unless the cysts are taken into the mouth through the means of contaminated food or drink. The cysts are the infective agents and are passed continually in the feces of the infected individual, many millions being passed per day by most carriers. The food or drink may be contaminated by a polluted water supply; through garden vegetables fertilized by human excreta; through the droppings of flies; and through the handling of food and drink by food-handlers who are infected and excreting the cysts in their feces. These are the most frequent and important methods of transmission and will now be considered separately, with the methods of prevention and control that have been found most efficient in practice.



1. *Transmission by Water.* A water supply contaminated by sewage is a very frequent source of infection with *Endamoeba histolytica* in regions where there is no properly impounded and filtered public supply, as in rural regions where wells and springs are depended upon for water and there is improper disposal of fecal material. In such regions amebiasis is most frequently a familial infection but, under certain conditions, as military operations in such regions, large numbers of individuals may become infected and veritable epidemics of amebic dysentery may occur. Such were the conditions in the Philippines during the Insurrection, when our troops were operating in the field, drinking heavily polluted water from local wells and springs, with their resistance greatly reduced through the hardships inevitable in campaigning in the tropics. Local epidemics of amebic dysentery were frequently observed among the soldiers at that time undoubtedly due to the use of water contaminated with feces containing the cysts of *Endamoeba histolytica*. Even in large cities having a filtered and impounded public water supply, amebiasis may be transmitted by water locally contaminated by sewage through cross-connections between sewers and the water supply pipes, as in the recent severe epidemic of amebic dysentery originating in certain hotels in Chicago.

Another method by which a contaminated water supply may transmit the cysts of this parasite is the use of such water in the irrigation of vegetable gardens, a striking instance of which has been recorded by Andrews (1934), in Fresnillo, Mexico. In this instance the water used for irrigation contained most of the sewage of the town and the vegetables were grossly contaminated by sewage with the result that the percentage of infection of the inhabitants of the garden districts was 44.1 per cent as compared with 15.8 per cent, the highest percentage found elsewhere in this city.

The prevention of the transmission of amebiasis by water depends essentially upon the proper disposal of sewage. In rural districts it is just as important to insist upon the installation of properly constructed and maintained sanitary privies in the prevention of amebiasis

as in the prevention of hookworm disease; for the indiscriminate disposal of fecal material upon the ground in the vicinity of dwellings will inevitably result in the pollution of the local well or spring and the consequent infection of those who partake of the water, provided a carrier of *Endamoeba histolytica* be present. Thus, in rural districts the installation and use of the sanitary privy is a most important step in the prevention of amebiasis.

Water obtained from a properly constructed and operated public filtration plant is harmless as it has been repeatedly shown that sand filtration removes the cysts of *Endamoeba histolytica* but such water may become a transmitting agent after leaving the plant through contamination locally through back syphonage, cross connections in plumbing, or breaks in sewers, and such contamination should be most carefully guarded against. There should be enforced the most stringent measures against cross connections between water supply systems which are safe for domestic use and those unfit for domestic use. Faulty plumbing has already been mentioned as the cause of the severe epidemic of amebic dysentery originating in certain Chicago hotels, and similar conditions as regards plumbing undoubtedly exist in many of our hotels and public and private institutions in other parts of this country. The importance of this method of prevention has been well emphasized by McCoy and Chesley (1934) who say:

"What has been learned from the Chicago epidemic should serve to stimulate greater zeal in the protection of water supplies with special reference to the distribution system as well as the general supply itself. The larger cities in which the myriads of intercommunicating pipes both public and private, supply the multiplicity of demands for water for various purposes other than consumption, as for industrial purposes, cooling, flushing, sprinkling, fountain jets, and the like, would probably present the greatest possible hazards. The small cities and villages are not free from similar dangers. Old installations and any system under stress of over demand, may menace health. To insure safety there should be no physical connection between



water supplies that are safe for domestic use and those that are unsafe for domestic use."

The installation of a filtered public water supply has always resulted in a great decrease in the number of cases of amebiasis and amebic dysentery. Thus, in Panama and the Canal Zone, and in Manila, the installation of such a supply resulted in a great decrease in the number of cases of amebic dysentery; so much so, that while formerly this symptom-complex of amebiasis was one of the most commonly observed disease conditions, today amebic dysentery is rarely encountered. It is thus evident that, where it is possible, the installation of a filtered public water supply is a most efficient method of preventing amebiasis.

The prevention of amebiasis by any known method of chemical treatment of contaminated water is impossible. The use of chlorine, so efficient in the sterilization of water for pathogenic bacteria, is worthless so far as the cysts of *Endamoeba histolytica* are concerned, and this is true of other chemicals that are at present employed in water sterilization. The cysts of this parasite are very resistant to chlorine and are not killed unless practically 100 times as much is employed as in ordinary water sterilization, an amount of chlorine very far in excess of any amount that can be used in water sterilization, and the same is true of other chemicals used for this purpose. The only practical method of rendering water safe if contaminated with cysts of *Endamoeba histolytica* is boiling, for boiling kills the cysts almost instantly. In rural districts or elsewhere, if there is reason to believe that water is contaminated with the cysts of this parasite it should be boiled before it is used for domestic purposes and travellers in regions where amebiasis is known to be endemic should insist upon the boiling of all drinking water and should avoid eating raw fruits or vegetables that may have come in contact with polluted water.

While contaminated water can be rendered safe by filtration through bacterial filters or small sand filters, the use of such filters is generally impracticable and boiling remains our only method of rendering such water safe.

## 2. Transmission by Garden Vegetables. In

many regions in the Orient and elsewhere truck gardens are fertilized with human excrement and vegetables thus fertilized, if eaten raw, may transmit amebiasis. It has been shown by numerous investigators that the cysts of *Endamoeba histolytica*, under favorable conditions of temperature and moisture, may remain viable in the feces for from 9 days to as long as three weeks after they are passed, so that it is readily understandable why garden truck may be a very important source of amebiasis if fertilized with such material. Fortunately, in this country, this method of transmission is of little importance for the reason that the law prohibits the use of human feces as a fertilizing agent, but the practice does obtain in some regions where truck gardens are operated by Japanese or Chinese, and the chance of such a method of transmission should be remembered where such a condition is present.

In regions where human excreta are used for fertilizing purposes the avoidance of eating uncooked fruits and vegetables from truck gardens is most important in the prevention of amebiasis. The writer has personally observed several cases of amebic dysentery produced by eating salads made from uncooked vegetables obtained from such gardens, and in the tropics and sub-tropics, especially in the Orient, this is an ever present method of transmission. In such regions, and, indeed, in all localities, the sale of vegetables or fruits thus fertilized should be forbidden by law. If the fecal material is stored for a period of a month before use it is probable that the cysts of *Endamoeba histolytica* would all be destroyed, but no dependence can usually be placed upon such storage being enforced in most localities, so that it is the part of wisdom to abstain from eating uncooked garden produce in localities where this practice obtains.

It is possible to render fruits and vegetables safe that have been thus fertilized by thoroughly washing them in running water and then immersing them in boiling water for 30 seconds, the temperature being kept at the boiling point during this time. In thus treating leafy vegetables, as lettuce, cabbage, spinach, kale, etc., it is necessary to separate each leaf, washing each

in running water, and then immersing for the time stated in boiling water. After this treatment the fruits or vegetables may be freshened by immersing them in ice-cold boiled water or placing them in the ice-box. However, it is best to abstain from the use of raw garden truck in any region where this method of fertilization is practiced.

3. *Transmission by Flies.* It has been shown by Thomson and Thomson (1916), Wenyon and O'Connor (1917), Roubaud (1918) and Root (1921) that the cysts of *Endamoeba histolytica* when ingested by flies feeding upon feces containing them, may live in the intestine of the insect for at least 24 hours and sometimes for as long as 49 hours during which time they are voided in the droppings of the flies in a viable condition. Frye and Meleney (1931) actually demonstrated the cysts of this parasite in the intestine of flies collected in 4 of 12 houses where carriers of *Endamoeba histolytica* lived. It is thus evident that flies may transmit amebiasis by contaminating food or drink with their droppings and where these insects are numerous; carriers are present; fecal material is exposed to flies; and food is not protected from these insects, they may be the source of many amebic infections. In 1916, the writer observed an epidemic of amebic dysentery among troops camped at El Paso which was, in his opinion, due to fly transmission. In the period between July and November, 1916, 118 cases of amebic dysentery occurred, all originating in the military camps at El Paso. As the troops used the same water supply as the citizens of El Paso, where there was no increase in amebic dysentery, and all other conditions were similar, with the exception that immense numbers of flies were present throughout the camps, it was believed that to these insects was due the outbreak of amebic dysentery. With the disappearance of the flies, upon the advent of cold weather, cases of amebic dysentery ceased to occur and the incidence of amebiasis returned to normal for that vicinity.

It should be remembered that the danger of contamination of food by flies lies not only in the cysts of *Endamoeba histolytica* reaching

the food by being voided in the droppings of these insects, but also through contamination by the feet of flies that have walked over fecal material containing the cysts. Kofoed, Kornhauser and Plate (1919) have shown that from 100 to 150 of the larger cysts, and from 500 to 2000 of the smaller cysts of this parasite could be crowded in a single layer equal to the area of the foot of a fly, thus indicating the possible danger of this method of transmission. It is undoubtedly true that whenever flies are numerous, fecal material containing the cysts of *Endamoeba histolytica* accessible, and food supplies are unprotected from flies, this method of transmission of amebiasis is most important.

The prevention of amebiasis transmitted in this manner depends upon the protection of food and drink from flies. The screening of rooms and mess halls from flies, and the screening of all food supplies exposed outside screened rooms should be rigidly enforced, and proper measures should be taken to prevent the breeding of this insect.

In military and civilian camps, in rural regions where soil pollution with feces is common, and under all circumstances where flies may reach human excreta, the protection of all food supplies by screening should be rigidly enforced.

4. *Transmission by Food-Handlers.* The writer has stated elsewhere (1934) that "The contamination of food and drink by food-handlers who are passing the cysts of *Endamoeba histolytica*, the so-called "carriers", is undoubtedly the most common and most important method of transmission in many localities, and certainly so in towns and cities having an impounded water supply and where sanitation is otherwise excellent", and while recently there has been an effort to minimize the danger of this method of transmission, the infected food handler must still be regarded as the principal source of infection in most localities. Apparently healthy carriers of this parasite pass enormous numbers of cysts daily, as shown by Kofoed, Kornhauser and Plate (1919), who found that the number varied greatly but in one individual with only a moderate infection, who was followed for 42 days, counts being made on alternate days by diluting the entire stool and

using the counting chamber of a hemocytometer, they determined that the total number varied from 330,000 to 45,000,000 per day, the average for the 26 days being 14,520,000 per day. It is not difficult to understand, in view of these data, how a food handler who is carrying this parasite, and who is careless as to the cleanliness of his hands, may be a very potent transmitter of amebiasis. Food-handlers in our hotels, restaurants, roadside eating places and other public eating places are especially dangerous if they are carriers of *Endamoeba histolytica* but the same is also true of cooks and others who handle food in the home if they are carriers. The incidence of amebic infection among food-handlers varies greatly, from 3 to as much as 23 per cent, according to recent surveys. Thus Johnstone and Iverson (1935) found practically 3 per cent of 747 food-handlers in San Francisco infected while Tonney, Hoeft and Spector, reported by Bundesen, Rawlings and Fishbein, (1933) found 23.6 per cent of 364 food handlers in a certain hotel in Chicago infected.

While the recent studies of Spector and Buky (1934) apparently demonstrated that within ten minutes the cysts of *Endamoeba histolytica* have perished after drying on hands experimentally soiled with feces containing them, this period would be amply sufficient to infect food if the individual handled it directly after leaving the toilet, and Andrews (1934) has demonstrated that the cysts may remain under the finger nails in a viable condition for periods varying from 5 to 45 minutes. It is thus evident that individuals whose hands are soiled with material containing the cysts of this parasite and who prepare sandwiches, salads, and other foods requiring handling, have ample opportunity for contaminating such foods. The experiments of Spector, Foster and Glover (1935) are still more conclusive of the danger of transmission of amebiasis by carriers, for they found that the hands of 74 carriers of this parasite, examined immediately after passing the feces in the usual manner, were contaminated with the cysts in 5 or 6.8 per cent. While these investigators argue from these results that the contamination of food by carriers must

occur infrequently, when it is remembered that only one examination was made of each carrier, this percentage who did soil their hands is very significant. If repeated examinations had been made, day after day, it is certainly true that a much higher percentage would have been discovered, and that the conclusion mentioned above is based upon insufficient data. In fact, it is evident that the opposite conclusion could be more justly drawn from their experiments.

The prevention of infection by food-handlers consists in the detection and proper treatment of carriers of *Endamoeba histolytica* who are thus employed. Ideally, no one who is a carrier of this parasite should be allowed to handle food but when one remembers the enormous number of carriers it is evident that their examination and removal from employment is impossible. The economic questions involved force us to the conclusion that only in certain localities is a general survey of food handlers possible and that in most places one must be content with a partial application of the ideal. How much can be accomplished with the means at hand must always remain a local question but the writer believes that it is perfectly feasible to examine food-handlers employed in hotels, restaurants and other public eating places in certain localities and to properly treat those that are found infected. Removal from their occupation is not necessary if those infected are instructed as to how they can prevent contaminating the food that they handle, for treatment can be administered without interfering with their duties. Certainly no one who is known to be infected with *Endamoeba histolytica* should be allowed to handle food in a public eating place unless treatment is administered as soon as the infection is discovered, and if possible, he should be prohibited from handling food until the infection is eradicated, but if this is impossible, the writer believes that an infected food-handler may pursue his occupation with little danger of transmitting the infection provided he is under proper supervision and has been instructed regarding his being a danger to others and told of the simple measures of personal hygiene that will prevent the transmission of the infection to others.



The detection of carriers of *Endamoeba histolytica* among food-handlers, as among other individuals harboring this parasite, depends upon its demonstration in the stools of the individual examined. Therefore, it is essential that laboratory personnel be thoroughly trained in the recognition of this ameba, in view of the fact that four other species of ameba live in the intestine of man, all of them harmless commensals. Unfortunately it is true that comparatively few laboratory workers are capable of differentiating *Endamoeba histolytica* from some of these other amebas and it follows that the first and most essential step in the prevention of amebiasis through food-handlers is the training of personnel in the differentiating of these amebas. This training can only be obtained under qualified instructors but any intelligent laboratory technician, if thus instructed, will qualify for the work within a reasonable period of time. As I have stated elsewhere (1934) "A laboratory personnel thoroughly trained in the differentiation of *Endamoeba histolytica* from other amebae and from intestinal flagellates is the first requisite in the diagnosis and prophylaxis of amebiasis."

It has already been stated that it is feasible, in many places, to examine all public food-handlers. If infected food handlers are discovered they should be removed, if possible, from their occupation and treated with one of the excellent drugs that are now available, i. e. chiniofon, carbarsone or vioform. They should not be allowed to resume their occupation until at least three examinations of their feces, made at daily intervals, commencing seven days after completion of treatment, are negative for the ameba. Thereafter, examinations should be made at monthly intervals for at least three months. They should be instructed to wash their hands thoroughly after using the toilet and to avoid depositing their feces where flies may have access to them or where there is any chance of their contaminating food or water. If it is not possible to remove the infected food-handler from his occupation, instruction should be given as to the importance of washing the hands, the disposal of his feces, etc., and careful supervision to enforce these instructions

should be insisted upon. At the same time treatment should be administered in order to eradicate the infection.

The occurrence of cases of amebic dysentery in individuals who have eaten at any public eating place should be a signal for the survey of all the food-handlers of such eating place for infections with *Endamoeba histolytica* and also for a survey of the plumbing for a possible chance of water pollution from cross-connections. It is not believed feasible to examine all food-handlers but this measure should certainly be enforced wherever there is a suspicion that any outbreak of amebic dysentery has been caused by the food-handlers in a specific eating place. Such surveys are practicable and a charge of negligence can be justly brought against any Health Department which neglects making such a survey under the conditions mentioned.

*Personal Hygiene and the Education of the Public in the Prevention of Amebiasis.* As the carrier of *Endamoeba histolytica* is the source of amebiasis in all localities, the part played by personal hygiene in the control of this infection is of fundamental importance. The prevention of amebiasis, both in the home and elsewhere, depends very largely upon the careful observance of certain rules of personal hygiene, especially as the vast majority of infections with *Endamoeba histolytica* will probably always remain unrecognized, owing to the fact that so large a number do not present symptoms of sufficient importance to attract attention or cause the infected individual to consult a physician. Under these conditions we must rely very greatly in the prevention of the infection upon the well known rules regarding personal hygiene, especially those relating to the washing of the hands before handling food or eating, and it is believed that if the simple rule of thoroughly cleansing the hands before meals and after the use of the toilet was universally observed, the incidence of amebiasis would cease to be of public health importance in well sanitized districts.

The education of the public regarding the importance and methods of transmission of amebiasis is most important in the prevention



of this infection. The writer is not one of those who believe that public education in disease prevention is of little value, but is convinced that it is one of the greatest aids in campaigns against any disease. This is a measure that can be pursued by any Health Department and will amply repay any efforts expended in making it effective. The public should be informed that amebiasis and amebic dysentery are not tropical conditions, as is generally believed, but occur in all parts of the world and are prevalent throughout the United States, especially in the warmer portions of our country. The methods of transmission and the part played by carriers in the transmission of the infection should be stressed and the importance of recognition and treatment thoroughly explained. The public should be informed of the simple rules of personal hygiene that are efficient in preventing the transmission of *Endamoeba histolytica*, and the measures that should be taken for the proper disposal of feces where there is no general method of disposal through properly constructed sewers. The education of the public regarding amebiasis is a practical and very valuable prophylactic measure and should never be neglected.

In conclusion, the medical profession can very greatly assist in the prophylaxis of amebiasis by the proper treatment of all known infections with which they come into contact. Every person known to harbor *Endamoeba histolytica* should be thoroughly treated with one of the recognized remedies now available, and the treatment continued until the infection is eradicated, if possible. Fortunately, with the drugs now available, i. e. chiniofon, carbarsone or vioform, the vast majority of infections can be eradicated, thus preventing the spread of the infection to others and the possibility of the development of serious lesions and symptoms in the infected individual.

## REFERENCES

- Andrews, J.: Am. Jour. Hyg., 19:713, 1934.  
McCoy, G. W., and Chesley: Jour. Am. Med. Assoc. 103:1145, 1934.  
Thomson, D., and Thomson: Jour. Roy. Army Med. Corps, 27-1, 1916.  
Wenyon, C. M. and O'Connor: Human Intestinal Protozoa in the Near East. London, 1917.  
Foubaud, E.: Bull. Soc. Path. Exot., 11:166, 1918.

- Root, F. M.: Am. Jour. Hyg., 1:131, 1921.  
Frye, W. W. and Meloney: Am. Jour. Hyg. 16:729, 1932.  
Kofoid, C. A., Kornhauser and Plate: Jour. Am. Med. Assoc., 72:1602, 1919.  
Craig, C. F. 1934. Amebiasis and Amebic Dysentery. C. C. Thomas, Springfield.  
Johnstons, H. G. and Iverson: Am. Jour. Trop. Med., 15:197, 1935.  
Bundesen, H. N. Rawlings and Fishbein: Jour. Am. Med. Assoc., 101:1636, 1933.  
Spector, B. K. and Buky: Pub. Health Rep. Wash. D. C., 49:379, 1934.  
Andrews, J.: Am. Jour. Trop. Med. 14:439, 1934.  
Spector, B. K., Foster and Glover: Pub. Health Rep. Washington, D. C., 50:163, 1935.

## DISCUSSION

Dr. Leon S. Lippincott, (Vicksburg). I consider it a distinct honor to be asked to discuss a paper by Colonel Craig. On the other hand, Dr. Shipp has made it very difficult for me to follow such an authority and to say anything on this subject. It is always a little dangerous to say "greatest," but I am willing to say that Colonel Craig is the greatest authority on this subject anywhere.

I do think that the Chicago experience has helped much in our understanding of the importance of amebiasis. It used to be said, you know, that amebic dysentery was a disease of the tropics or warm countries. Colonel Craig and others have repeatedly warned the doctors of this country that it could and did occur in temperate climates and even in cold countries. We found this out in Chicago.

This Chicago experience had another effect. It brought out the varied conditions that may occur in this disease, that is, there may be no signs or symptoms, or there may be only vague signs or symptoms, or there may be serious signs and symptoms and the patients may go on and die.

In this Association we had a horrible example of what may happen. We have a member here in this Association, a young man who has lived in the South all of his life, and had not contracted amebic dysentery. He saw fit and was fortunate enough to be married the year of the Chicago Fair, and he took his wife to Chicago for the honeymoon, and there he did contract amebic dysentery. He had rather a serious time. It is not always a disease of the tropics.

There is another point that I think has been emphasized by this experience. That is the real danger at times of mistaking amebic infection for a surgical condition such as appendicitis. This same doctor at one time while in Chicago had symptoms suggestive of appendicitis. Fortunately he was not operated upon.

I think we should remember in considering the various symptoms of amebiasis that there is nothing to prevent a person from having in addition to amebic infection some other diseases. The fact

that a patient has amebic infection should not keep us from treating any other condition present.

I, personally, do not understand very well why there should be such a difference in the symptoms and the findings in amebiasis. Apparently it is not a matter of virulence, because cysts taken from patients apparently without symptoms and fed to animals will produce at times the most virulent dysentery. As Colonel Craig has said, a person may be a carrier and go on for years without symptoms and then suddenly become seriously ill. It may be a matter of resistance.

I have spoken before a number of times—some of you may be tired of it—of the importance in public health and in medicine of differentiating between dysentery and diarrhea due to something other than amebae or dysentery bacilli. I think the health officers would make a distinct contribution to our study and handling of dysentery if they would insist—I know it is not always possible, but as far as possible—when a case is reported as dysentery, on trying to have that case proved, proved that it is or is not amebic or bacillary dysentery.

I would like to ask Colonel Craig in regard to the complement fixation test, whether he considers that it may add to our means of diagnosis or become practical for general use in handling amebiasis somewhat as we use the Wassermann test rather profusely in handling syphilis.

I want to personally thank Colonel Craig for bringing this paper to this Association.

Dr. Seale Harris, (Birmingham, Ala.): Though it is irrelevant to the discussion of Dr. Craig's paper, I would like to tell the doctors of Mississippi that two or three times, in the privacy of his office at Vanderbilt University School of Medicine, Dr. Leathers has told me that he regards Dr. Underwood of Mississippi as the very best health officer in the United States. I am sure that you gentlemen agree with Dr. Leathers on that; but I know that it is pleasant for you to have such an estimate placed on your health officer by a man who is regarded as perhaps the greatest man in preventive medicine in this country, and probably in the world.

I would like to join with Dr. Lippincott in saying that Colonel Craig is our greatest authority on amebiasis. I have known Colonel Craig for many years, and I know that he has studied the various manifestations of amebiasis scientifically and from the practical viewpoint of a clinician. I have recently read with interest and profit his new book on amebiasis, and I would advise anyone who is interested in the subject to read this book. Unquestionably amebiasis is a much more frequent condition than many of us have realized, though I am convinced that the very excellent work of the health departments of Mississippi, Alabama and

other Southern States has reduced the prevalence of this tropical disease. I lived in Mobile from 1906 to 1915 and while there began making routine examinations of the stools of every patient that came to me. In that period amebiasis was a frequent condition. We sometimes found the *Endameba histolytica* in patients who never had dysentery. I have continued to make routine stool examinations on every patient that has come to me, but I now rarely find the ameba. In fact, I have never found a case of amebiasis that originated in Birmingham. We have had a few cases in Birmingham that were contracted in other cities; one, a very prominent citizen who attended the Chicago Exposition, developed a serious case of amebiasis. I am sorry, of course, that Chicago had an epidemic of amebiasis; but I am glad that the people of the country realize that this condition is more or less endemic all over the United States.

Reading Dr. Craig's book recently was of great value to me in dealing with a case of amebic dysentery that originated at Wheeler Dam in North Alabama. The patient had been examined by competent men in several cities and the *Endameba histolytica* could not be found in his stools. We found one protozoan that resembled the endameba, but we were not sure that it was the histolytica organism. This patient was quite anemic, very weak and had considerable temperature at times. We transfused him three times. A diagnosis of ulcerative colitis had been made. Proctoscopic examination did not show the lesions of ulcerative colitis; but there were ulcers, apparently of the amebic type, in the sigmoid. Following a suggestion in Dr. Craig's book, we used carbarsone and the patient was relieved and apparently cured. I believe that carbarsone is the best and least dangerous of the arsenical preparations used in the treatment of amebiasis.

In visiting the Canal Zone some years ago, Dr. James and others informed me that they have had cases of amebic dysentery in which they examined the stools of patients daily for thirty days and did not find the ameba, but found it on the thirty-first day, but knowing all the time that the patients had amebiasis. While it is best to find the ameba before making a positive diagnosis, at the same time, it is not always advisable to wait until the parasite is found in the stools before giving specific drugs like carbarsone.

Dr. D. L. Hollis, (Biloxi): I just want publicly to thank Colonel Craig for his paper. I feel that it has been of more interest to me than perhaps most of you. After having served a number of years in the Canal Zone and other tropical countries, I can full well realize the value of this paper and the authority that Colonel Craig is.

I shall not, as Dr. Lippincott told you, attempt to add anything to what the Colonel has told you,

but I would like to give you some of the things I saw while in the tropics. Amebic infection is a funny thing to me. Sometimes these cases will run right along and be smooth and easy and apparently of no trouble to the patient and all of a sudden they will blow up sky high with a liver abscess and you have a very sick fellow on your hands.

Another thing is why the mask of abdominal symptoms that you get out of this immediate infection. I saw a number of post-mortems in the Canal Zone done by Clark. You will take a case in which the host has had no previous symptoms and develops a liver abscess and dies as the result. You will see numerous lesions throughout a large part of the intestinal tract. They vary in size and cover a tremendous amount of distance. These lesions are both micro-and macroscopic and I have often thought about that and as Dr. Lippincott said he wondered about the resistance in this amebic infection, I have often wondered if it did not vary to the amount of intestinal damage you have. These lesions are confined to the large bowel. Amebic infection is not confined as most people believe, to the tropics. It is sub-tropical as well as elsewhere. Another thing that I noticed was that the most of these cases came from the low lands. In some parts of the tropics human fertilizer is used in truck farming and it is by this means that amebic dysentery is spread as the soil in the tropics where your temperature is more or less even makes a good culture medium for the ameba, while in the mountainous regions you do not see so much amebic dysentery.

There are two things I would like to say something about and that is liver abscess and abdominal symptoms. I saw a number of liver abscesses in the tropics. They are very interesting. They sometimes come in with no previous symptoms and develop abscess. Liver abscess appears in about twenty per cent of the cases. They are as a rule single and rather large, however, they are occasionally multiple. These abscesses were drained by a high right rectus incision and while in Mexico we drained through the rectus and chest wall. A lot of times you can aspirate and drain them out. I think one of the reasons why in the Chicago epidemic you had a number of bellies opened up for appendicitis was that you had some large lesions in the upper part of the large bowel which produced pain and a leukocytosis. One of the features of the pain of amebic dysentery is that the pain is referred to the umbilicus, hence the diagnosis of appendicitis.

I would like to say a few words about the treatment. When I was in the Canal Zone, treatment worked out by Connor and Bates which proved very effective was one-half grain of emetine in the morning and afternoon for four days then one

grain daily until you run it up to twelve grains. Connor thought he got better results from one-half grain twice a day than from one grain once a day. In Mexico, yatren was used rather extensively with good results. More recently, however, we have carbarsone which has proven very effective and I believe should be used in preference to other drugs in the treatment of amebiasis. Another good thing where you have a lot of lesions low down, is an irrigation of a one to one-thousand quinine solution to be retained as long as the patient can retain it. Emetine should not be given to amebic carriers. For liver abscess it is a matter of choice whether or not you go in through the belly wall or chest wall.

Colonel Craig, (Closing): I want to thank the gentlemen for the discussion. It is very gratifying indeed to have compliments paid to one, especially when they are made by people whom you respect and for whom you have a decided affection. I know that all of these gentlemen, from their reputations, are excellent diagnosticians, but I believe they made one mistake from the remarks they made about myself. I think it is one mistake in diagnosis that can be chalked up against them.

Dr. Lippincott spoke about the necessity of remembering that other conditions may be present in your patient that present certain symptoms even though amebiasis may be present and that it is not necessarily true that amebiasis is the cause of the symptoms. I think that is a timely remark. We must not think that because we find the ameba that necessarily the symptoms are due to that—it may be that the patient has some other condition that is causing them. The only proof we can have is a thorough physical examination, and if nothing else is found and the symptoms disappear after amebicidal treatment I think it is fair to assume that the symptoms were due to the ameba.

Now as regards the question of resistance, I can not go into that. I could talk all the afternoon on it, because I am greatly interested in it. Drs. Meleney and Fry believe there are different strains of this ameba, some of which are virulent and some much less so, and they have apparently proven in experiments upon kittens that there are strains that are more virulent than others. For instance, they found a strain in the low-lands of their state which produced more pathology in people than strains in the hill part; however, all of these strains were pathogenic—they all produced some lesions. I am perfectly prepared to admit that there may be differences in virulence, but there is one thing I am not prepared to admit—that the amebae live as commensals in the lumen of the bowel without invading the tissues. This ameba is a tissue parasite. They may not all be able to get into the tissues, but some of them do.



I believe there is no such thing as a carrier of this ameba who has no invasion of the tissues of the body. That brings up the question of why some people present severe symptoms and others none—it may be the dose of the infectious agent. In the Chicago epidemic the cases presented symptoms within a month and some within a few days. This can only be explained by massive doses of cysts which they swallowed in the badly polluted water supply.

The same thing occurs in typhoid infection, and I was very much interested in the paper on typhoid vaccination because I was in the army for years. We had some typhoid in the army in Europe among those vaccinated, but we had it because we had massive infection such as could never occur under ordinary conditions in American cities, so this explains why some people may show symptoms while others do not. It may be the dose of the infectious agent. In my experience if we make a survey for amebiasis and find 100 cases of infection we usually find at the most about 50 who will give no history of any symptoms that could be due to the parasite. That does not mean they do not have lesions—they do have lesions. Dr. Bartlett, in Egypt, in making autopsies of soldiers wounded in battle and who never had symptoms of dysentery, found definite amebic dysentery ulcerations in many of these men. In other words, we can have macroscopic lesions without necessarily having symptoms, and when symptoms do occur in amebiasis he believes it is true that there is a considerable amount of ulceration already present. In some individuals these lesions heal very quickly, and the amebae may be found deep down in the submucous coat, with no evidence of any inflammatory condition around them. Those amebae are in a little nest there, but they may get into the capillaries and be carried to the liver. Usually amebic abscess does not develop because the liver is able to overcome the infection, but amebic abscess of this organ may be the first symptom of amebiasis. I think that individual resistance is the chief factor as regards symptomatology and some people are very resistant.

As regards the complement fixation test, it was first used in Europe but owing to imperfect technique was abandoned. I think I was the first to revive it and work out a technique that is practical. As to whether it will ever be used as widely as the Wassermann test can not be answered positively. I would say it will be many years before it can be so used. The ameba must be cultivated or infected dogs must be kept in order to secure material for the antigen extract. As you probably know, the test is already in routine use in several institutions and is of value where the ameba can not be demonstrated.

As regards treatment, of course I can not go into that. I mentioned the drugs used most ex-

tensively, carbarsone and chiniofon. These drugs are effective. Emetine is more effective than any other drug in the treatment of symptoms of amebic dysentery, but is seldom curative. The dosage should never exceed 1 grain a day over a period of 12 days and then other specific drugs should be used to cure the infection. Emetine is a toxic drug and many people have been poisoned with it, myocarditis resulting. It should never be used in the treatment of carriers.

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## THE PHOBIA OF HIGH BLOOD PRESSURE\*

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High blood pressure is undoubtedly one of the commonest conditions met with at the present time. The general impression seems to be that it is on the increase. It is possible, however, that keener observation and the more general use of the sphygmomanometer has merely made it more readily recognized. Certainly the knowledge of the laity regarding it is increasing by leaps and bounds. It has become a frequent topic of discussion in small social gatherings, subjects discussing their blood pressure with one another and comparing their symptoms and respective readings. The increasing number of sudden deaths from angina pectoris never fails to bring up the frequent association of high blood pressure with this dreaded disease. The relationship that hypertension bears to apoplectic attacks is well known to everyone nowadays and finally its frequent association with Bright's disease is common knowledge.

All of these facts have tended in recent years to create a state of apprehension in the minds of people regarding hypertension which does not always seem justified. With this hearsay type of information and increasing fear of blood pressure by the public it becomes of greater importance for us to develop an ability to carefully evaluate its symptoms, recognize its progress and sense

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its dangers when such exist. I fear that we do not always do this and by failure to educate our hypertensive patients properly toward their ailment we sometimes permit them to assume a wrong viewpoint in the matter. A fear complex which many of these patients develop can so complicate the picture of a simple hypertensive case as to become a serious problem to contend with, often producing symptoms entirely separate and distinct from any which may be due to the mere blood pressure elevation itself. The title of this article, the *Phobia of High Blood Pressure*, expresses well the meaning I intend to create. It is borrowed from a short paragraph of less than twenty lines in Fishberg's book on "Hypertension and Nephritis". After deploring somewhat the knowledge that the general public has about hypertension Fishberg says: "It is very common nowadays for one who has always felt well to learn as a result of an insurance or periodic examination or a visit to the doctor for some trivial complaint that he or she has high blood pressure. Then, often enough, the peace of mind of the patient is gone, symptoms make their appearance, and there start the troubles of the patient, and, even more, of the family." This has been so true in my experience that I felt it deserved stronger emphasis especially since, as physicians, our attitude may contribute to these troubles and to this disturbed peace of mind.

The great difficulty in many high blood pressure cases is to properly evaluate the symptoms which the patient presents and determine their connection, if any, with the blood pressure. This is often a most difficult thing to do because so many hypertensive patients develop this attitude of fear regarding their blood pressure. This anxiety state borders on and frequently becomes an actual neurosis. Furthermore, let us not fail to remember that no disease or condition has ever existed that a well founded fear neurosis will not simulate. Once a hypertension case develops this phobia regarding

his high blood pressure there is no symptom; he may not show. Transient attacks of palpitation and tachycardia are common symptoms in hypertension. How much more common are both of them however in connection with anxiety states. Substernal discomfort or oppression bordering on actual pain in the precordia are complaints one cannot fail to take serious note of in a hypertensive patient, but do not the same symptoms frequently harass the psychoneurotic? I have a hypertensive patient at present who helped by business diversion can work and walk the streets throughout the day without discomfort but when alone his nights are disturbed with what he calls difficult breathing which on careful study analyzes itself into a feeling of weight under the sternum which periodically every few minutes makes him take a full deep inspiration. He calls it shortness of breath but he has a competent heart. It is merely an anxiety state and has no pathologic connection with his heart or blood pressure.

Another patient, who died a few months ago, I first saw 17 years ago, when aged 47 years, because of a severe nose bleed, at which time her blood pressure was 200/120. No doubt she had an abnormal pressure for a number of years before, although no symptoms existed. From the very first this patient developed an attitude of inquiry regarding blood pressure not only from me but among her friends and relatives; their experiences, their symptoms, their anginal attacks and all the other multiplicity of possibilities. For 15 years I had on my hands a most intelligent and trustful but a most apprehensive patient who had at various times attacks of vertigo, severe headaches, nervousness, mild thoracic oppression radiating down the left arm, attacks of so-called dyspnea and a variety of other minor symptoms, yet during these 15 years she was in most excellent health with blood pressure ranging between 165 to 220 systolic and 100 to 120 diastolic. An encouraging viewpoint was always taken because of the good cardio-

vascular-renal background and because it was recognized that her symptoms after most careful evaluation always presented a tinge of unreality. Long periods of freedom from symptoms followed reassurance and encouragement and judicious education regarding her symptoms. Even her attacks of self-suspected angina were readily relieved by these methods and never was the hypodermic needle necessary. In fact no real anginal attacks ever occurred but she tried hard to have them. A happy, active, useful existence resulted until renal involvement first became manifest and was the final cause of death very recently after 20 to 25 years of hypertension but with little real pathology until 2 years ago.

These cases are not unusual. I could cite many similar ones, but I mention these merely to bring out two points, first, the fact that phobia of blood pressure can produce symptoms in itself, and second, the fact that many years of activity can be carried on in spite of uncomplicated hypertension. Uncomplicated hypertension is therefore not of itself a serious menace to life.

What are the conditions which make hypertension serious? There are three: first the status of the heart, second the blood vessels, third the kidneys. It is estimated that of those persons who eventually die from the effects of high blood pressure, 60 per cent die of cardiac conditions, 20 per cent of vascular accidents, and 10 per cent of kidney disease. No hypertensive case should fail to be given a most careful study of the heart, blood vessels and kidneys. This is the paramount duty of the attendant because on these factors the treatment to a great extent depends and the prognosis entirely hinges.

Many cases of hypertension require no treatment at all other than some good sound advice regarding living conditions. These are the cases which show no evidence of the ill effects of the hypertension on the heart, blood vessels or kidneys. If they carry out good sensible advice they need no medication

and often are far better off without blood pressure observations. Too frequent contact with the physician gets them blood pressure conscious and helps to encourage the phobia of blood pressure which one should strive to avoid. I do not mean to imply that these persons should not submit to an annual or even semi-annual health examination. In fact, they should do so and they are among those in whom it is most advisable.

If, as has been said, cardiac failure is the most frequent cause of death in hypertension, what are the prominent cardiac manifestations and dangers? Evidence of cardiac hypertrophy, accentuation of the aortic second sound and sometimes forcible vigorous heart sounds are common manifestations. Sometimes the consciousness of vigorous, pounding heart sounds is what first brings the hypertensive patient to the physician. None of these are danger signals as a rule for cardiac failure is rarely, if ever, an early direct result of hypertension. A warning should be issued as regards telling the patient he has an enlarged heart. An enlarged heart is a terrible indictment to many people and they are not to be expected to know that the enlarged heart of hypertrophy is a natural conservative compensatory response to peripheral resistance and entirely different from the dilated enlargement of beginning congestive heart failure. Many years of freedom from serious cardiac symptoms can pass in spite of marked hypertension as long as the left ventricle continues efficient and able to combat the increased load. When, however, coronary sclerosis causing chronic myocardial changes or similar degenerative changes occurs from infections or other reasons then hypertension becomes a serious menace to life. Symptomatically this type of myocardial failure does not differ from that due to valvular lesions or other causes, nor is there any contraindication to digitalis in its treatment. The coronary features of hypertension may be mild, moderate or severe. Mild repeated attacks may occur at intervals for many years. Severe attacks are always

serious. The attacks with thrombosis are of course still more serious because of the immediate danger and the residual damage done to the heart muscle. Efforts should be made to differentiate between mild attacks of angina due probably to coronary spasm and those due to thrombosis.

Valvular murmurs alone are not of great significance. A systolic murmur at the base rarely means anything more than sclerotic changes in the aortic valves or aortic ring with or without some dilatation. It is commonly present for years. The systolic murmur at the apex transmitted to the axilla usually means a relative mitral regurgitation due to some dilatation and enlargement of the mitral ring. This is not of serious significance either unless signs of congestive failure are present. It may have a safety valve effect in relieving undue pressure in the left ventricle. After all is said such symptoms as dyspnea and cough and early edema are the chief danger signals.

The condition of the blood vessels is undoubtedly of great significance in the evaluation of hypertension. Palpable radials, tortuous temporals and sclerotic changes in the retinal vessels should always be sought for. Absence of any well defined evidence of sclerosis is always encouraging. With a competent heart and good or even fair peripheral blood vessels I always feel satisfied even though the pressure may be high. It is notable how many years a hypertensive can carry on provided vascular degeneration is not advanced. Later when sclerosis occurs no one can estimate the possibilities. Symptoms due to vascular claudication may occur from time to time but do not seem to be a forewarning of anything more serious. When an apoplectic attack may occur it is impossible to even surmise. The height of the blood pressure is of course important but the state of the vessels seems more so. A high diastolic is of greater significance than a high systolic reading.

The condition of the kidneys should never fail to be a point of special study. The mere

presence of albumin and even a few hyaline casts need not cause alarm. While such findings should indicate renal changes much more important is the ability of the kidney to eliminate. The necessity of determining this is very great. The phthalein output should always be determined, likewise the ability of the kidney to concentrate urine. Both are simple tests which any general practitioner should be able to do. Blood chemistry observations are always helpful but are not necessary or essential when the two former tests are good. While the renal part of the picture in hypertension is important death directly due to it occurs in only a small percentage of cases.

#### CONCLUSIONS

1. High blood pressure alone, i.e. unaccompanied by manifest disease of heart, arteries or kidneys is not a menace to life nor a hindrance to many years of an active existence.

2. Many cases of hypertension when first discovered have competent hearts, good blood vessels and satisfactory kidney function.

3. The determination of these factors regarding the heart, vascular system and kidneys is the most important duty of the attending physician.

4. The treatment largely depends upon these factors.

5. The prognosis almost entirely depends upon them.

6. Many physicians do not give these important factors the consideration they deserve and attach too much significance to the blood pressure alone.

7. This tendency often tends to get patients blood pressure minded and produces an anxiety state which causes symptoms not directly attributable to blood pressure.

8. Entirely too much emphasis has been placed on the height of blood pressure and not enough to a careful study of these other necessary factors.



# DISCUSSION

Dr. J. M. Bamber (New Orleans): Of all the ills that beset man in the medical category hypertension is surely one of the greatest. Dr. Eshleman's paper is to the point, and there is no question in my mind but that in many households, probably in small communities, the peace of mind rests on the height of the mercury column in the Baumanometer, which, of course, is a mistake. Of course, we have to realize the fact that studies of large groups of people by insurance companies show that the mortality rate is increased in proportion to the height of the blood pressure above a given normal at a certain age. The higher the blood pressure the worse the prognosis. That is that side. I think where we get into trouble is trying to apply that to the individual who is sitting in front of you, like I have done in the past in other kinds of heart disease. It is true that hypertension carries with it a certain amount of danger for the future.

Dr. Eshleman mentions people seen years ago who are still living. I remember one lady I saw in 1912, blood pressure systolic 240. She wanted to live long enough to see the children out of school—they are all married now. She still has high blood pressure and feels better than she did in 1912. Women are scared to death about hypertension during the time of the menopause, because somebody has talked about deaths due to high blood pressure. I have had people to say, "The doctor took my blood pressure and he almost jumped at me and said "Don't you know your blood pressure is 200?" Then the trouble begins, and it is a question hard to manage. It has been said that uncomplicated hypertension has no symptoms and they only have symptoms when somebody tells them they have. It is said again, the symptoms of hypertension are those of nervous origin, each person is a law to himself. You have to keep the neighbors from talking to them, telling them of people who die from hypertension, reassure them, tell them the possibilities, as for instance about this lady who has had hypertension since 1912 and is still living, give them such encouragement as that.

I would like to say a few words about the subject in general starting in with the beginning, the etiology, what is the cause of hypertension. My opinion is for what it is worth, that the combined medical knowledge of the earth to-day in reference to the etiology of hypertension equals exactly nothing. We spoke here yesterday of arteriosclerosis heart disease. The same thing applies to arteriosclerosis—we don't know. So we can dispense of the etiology very quickly.

Now the diagnosis. When people come to the

doctor's office and have their blood pressure read for the first time, they are frightened. It will, at times, drop 50 millimeters at the next visit. So we should make observations several times, not the first reading. That is about all one can say about the diagnosis.

What is the prognosis? Well, I have just said about that. I may say this, that it is always more serious in men than in women. People live out their lives with hypertension—we are speaking about the benign or essential hypertension—we won't say anything about the malignant type. The prognosis is good, as Dr. Eshleman said, as long as it is uncomplicated and depends on the individual patient, his willingness to live and persevere, his eating, weight, habits and work, his environment and temperament, man or woman, and has to be handled as that individual and not as one hundred people. So the prognosis is favorable in uncomplicated hypertension.

I would like right here to say a word about treatment. That again depends on the patient. To my way of thinking, there is no treatment for hypertension. If overweight, do something; if nervous, apprehensive, scared, pacify him; if he uses too much of anything that is against him (I don't think that tobacco or alcohol has anything to do with it) if he cannot sleep at night, he can be helped, in addition to advice, by luminal or other sedative, sodium bromide, not continuously, but until symptoms are relieved. As far as anything given to reduce his hypertension over a period of time, I haven't a particle of faith in any of them. They are no better than the sedative effects of the things I have mentioned.

Now, about diet, I have had this happen to me and suppose you have had too. I can recall this woman, pale, anemic, blood pressure way up, hemoglobin way down, that had almost forgotten what meat tasted like. I can recall a few of that kind, when put back on meat their blood pressure remained where it was and their general condition improved, and their hemoglobin and blood count went up. I have no faith in doing without meat but I still believe I have a little fear. I still say "Just have one or two servings of meat a day." I remember a woman I treated at Touro Infirmary whose blood pressure was 280-150. When asked how long it had been since she had tasted meat, she replied, "Five years next March." In five years she had not tasted meat and her pressure was 280. If you see many like that you are certainly bound to lose faith in taking meat away from them.

It has been said that worry was the cause of hypertension. There is good reason to doubt this.



The colored race as a rule do not worry much—but they have hypertension.

Dr. I. I. Lemann (New Orleans): We have heard such an intelligent and complete discussion of the topic from Dr. Eshleman and Dr. Bamber that there is very little left to be said. The topic is so important that I think that those of us who have had some experience with it ought to get up and "bear witness."

I have been interested in this particular group who have had high blood pressure for many years. Several years ago I undertook to find out whether climatic conditions might have anything to do with high blood pressure. I turned to the records of blood pressure taken in various parts of the world, in cold places and hot places, particularly in hot places in the tropics, and I found that a good many records of blood pressure readings in the tropics were very high, and other blood pressure readings in the tropics, and particularly in China, were very low. And remarkable to relate, the blood pressure of the Chinaman is low, and the Caucasian who comes to lead the kind of life the Chinaman leads is also low. So that it is difficult to attribute any importance to the temperature, or to the climate. Perhaps the mode of living is more important. My friend, Dr. N. R. Houston, formerly of Augusta, Ga., has, as many of you know, written several papers of interest and importance upon the occurrence of hypertension among Chinamen, or rather the absence of this disease among Chinamen. He is rather of the impression that the difference is racial rather than one of mode of living.

I would like to refer to several other things Dr. Eshleman spoke of. There is for example, the importance of making renal functional tests. It has been my experience that the phenolsulphonphthalein test is almost always high, even when we have other evidence of kidney impairment. On the other hand, the simple observation of the power of the kidney to concentrate is very reliable. We determine the specific gravity of the urine at various times of the day, after abstinence from food or water, and after taking of water.

I hesitate to say anything more with regard to the treatment of hypertension after the very thorough-going statement of Dr. Bamber. I would like to add to his disbelief in drugs my own emphatic disbelief in any kind of drugs. I think nitrates, vasodilators, all are of no use whatever, and would like to condemn one mode of treatment which he did not mention, namely, purgation. We find it a common thing to have these people with hypertension constantly being purged with Epsom salts, with calomel, and other things; I think to their detriment.

Finally, I would like to make allusion to I think

almost the last statement of Dr. Bamber as to the relation of hypertension to arteriosclerosis. I think he will agree, indeed he did agree when he mentioned negroes, that arteriosclerosis occurs frequently where we do not have hypertension, and on the other hand we have many cases with long continued hypertension with no evidence, at least in the peripheral circulation, of sclerosis. We should make a distinction between arteriosclerosis, sclerosis of the large vessels, and arteriosclerosis, sclerosis of the vessels that cannot be palpated. Of this arteriolosclerosis the only evidence, apart from the high blood pressure and the renal changes, is to be found in the retina.

Dr. Hans Schroeder (New Orleans): Recently I saw for an insurance company a colored man, age 50. He was being treated by one of our young colleagues for hypertension. His B. P. was 140/80 when I saw him. According to his statement the doctor told him to eat a small piece of meat, one egg, a piece of fish, and a piece of chicken once a week. I then asked him what he ate. He did not understand me and after explaining my question he told me: spinach, cabbage, and greens.

How any person can keep up strength and courage on such a rabbit diet I do not understand. Gentlemen, if people have phobias about high B. P. the medical profession is to blame. Think of such a fool diet and then perhaps Epsom salts twice a week besides. That's enough to give any layman the creeps—and me too.

I stated in my paper on glaucoma that meat has nothing to do with vascular hypertension and I want to repeat it here. My experience may not mean anything to you, but please look up the literature. McLester's article I referred to gives you the references. Aubry of Paris (J.A.M.A. 104:764, 1935) stated recently that in many cases of hypertension kidney lesions are either minimal or absent.

In the glaucoma case I am referring to, the B. P. was 150/95. An internist said the other day that it was not high, but I say that it is too high for anybody who has been off meat for 8-9 years. After 4 months treatment the B. P. was 130/80, which I consider ideal for a woman of 63.

Dr. A. E. Fossier (New Orleans): There is no doubt Dr. Eshleman brought up a very interesting subject and one that especially demands the attention of every general practitioner, nor that this country has been overconscious of the subject of hypertension ever since the invention of the blood pressure machine—and not so long ago I had one of the original ones. I think phobia has been the cause of many symptoms.

I have been able to observe a case for thirty years, who died very recently at the age of seventy-eight or eighty, had high blood pressure during all

that time and he even developed a murmur in the second intercostal space to the right. His blood pressure went over 200, 220, and we considered it fortunate to be able to keep it down to 175 or 170. These people live in comparatively good health during that time. Phobia is a good deal the cause, and probably the knowledge of medicine that the average layman has is another. You tell a man he has Bright's disease, he sees the end results only of the disease; that he has heart disease, he sees the end results; tell him tuberculosis, sees only the end of the disease; he does not think of the intermediate stage where he can be made to live many years and way above the normal span of expectancy. That is one reason they have phobia. Another is because we ourselves have fear and transmit it to the patient, and they have symptoms following, become introspective, study themselves, magnify every little symptom.

I agree with Dr. Bamber about meat. Years ago I gave up the idea that meat injures any case. Contrary to all teaching, I have allowed my patients the use of meats. I cannot see where they do any harm in these cases.

I have made a strange observation in my consultation cases at the Ear, Nose & Throat Hospital. I have noticed a large proportion of cases of so-called hypertension without any other signs but arteriosclerotic kidneys or heart, blood pressure 240 or 250, sent to me because they have cataracts. I don't know the relationship.

I, fortunately, come from a family of whom you may say they never die. I have a grandmother ninety-seven who has been ill with grippe, blood pressure never over 120 or 125. These people live to a ripe old age who have the tension of their early youth. Those who live to an abnormally old age are those who have blood pressure within normal bounds. Therefore, I never could agree with the formula given out by the life insurance companies on the increase of the rate according to age, because I have found that in people who live to be really old it is not the case. Those who live to sixty, sixty-five or seventy, that is the natural span of life, will have a blood pressure of 140 or 150, but if you inquire into the history of those who live to be eighty, ninety or one hundred, their blood pressure remains what it was in their youth.

Dr. Erwin Wexberg (New Orleans): I should like to say a few words about the question from a psychotherapeutical point of view. The question arises as to how to make the patient get rid of the phobia. Even if he understands all the encouraging ideas given him by the physician, he is at a loss to conquer this bad habit of introspection. If he makes up his mind not to think of it, just as surely will he think of it.

In connection with this is the fact that a certain artificial factor has to do with the development of these phobias. You will find many of those people who develop phobia, as a rise in blood pressure, are not busy, or have no work to do, or in other words no interest in life, and out of this vacuum the phobia very often rises. These patients have to be given some positive new interest, or stronger emphasis on interest already existing, or work they are able to do. The psychotherapeutical rule is to keep these patients busy.

Dr. Chas. L. Eshleman (In conclusion): The time is limited and there are other papers to follow. I wish to thank Dr. Bamber and others who contributed to the discussion.

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## THE IMPORTANCE OF THE EAR, NOSE AND THROAT IN THEIR RELATIONSHIP TO FOCAL INFECTION\*

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Dorland's Medical Dictionary defines focal infections as: "Infection in which bacteria exist in circumscribed confined colonies in certain tissues and from there are sent out into the blood stream." We should have a broader view of this definition, since it is well understood that a focal infection does not always mean a bacteremia, but that micro-organisms at times find their way to other parts of the body by way of the lymphatics, and the absorption of toxins from a given focus will often cause disease in remote organs and that allergic manifestations may be caused by the proliferation of bacterial proteins.

It was in 1914 that Billings and Rosenow centered the attention of our profession on the part that hidden foci play in the causation of such diseases as arthritis, nephritis, pyelitis, endocarditis, myocarditis, neuritis, myositis, pleuritis, iritis and others.

The commonly recognized areas of foci causing systemic manifestation are teeth, tonsils, para-nasal sinuses and ears. In children the order is somewhat different, viz., the tonsil, ear, para-nasal sinuses and teeth. The less recognized areas of infection are the other lymphatic

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structures of the naso-pharynx and the oropharynx, the pharyngeal tonsil or adenoid, the lateral pharyngeal folds, other pharyngeal lymphoid tissue, and the lingual tonsil. Focal infection of lymphoid origin does frequently occur even after the thorough removal of the tonsils and adenoids.

The tonsils on account of their structure and situation most frequently harbor foci of infection which harm distant organs, the hemolytic streptococcus being the greatest offender.

V. V. Wood believes that bacteria gains access to the blood and lymph stream for the production of secondary foci more readily from the lymphoid structures of the throat and the middle ear and mastoid cavities, which have abundant blood supplies and lymph drainage, than from the sinuses in which the mucous membrane is poorly supplied. Since it is estimated that streptococci are responsible for more than 80 per cent of all blood stream infections, we are confronted with the importance of studying the various biologic groups of this organism, the respective cultural characteristics and pathogenicity of the different strains, as well as the serologic problems thus imposed.

The major role played by the tonsils in the production of disease is well recognized and need not be emphasized at this time. We can also assume that the other lymphoid structures of the throat play their part by compensatory hypertrophy after removal of tonsils, whether activated by descending infection from the sinuses or not; however, there is still controversy over the sinuses and the middle ear in this respect.

In considering the middle ear we have to remember that while in most cases of otitis media it can be readily discovered, even when the membrana tympani is intact, yet there are cases in which serious general infection is caused by aural sepsis which only the most careful examination can detect. Not only may there be no discharge and little or no pain, but the membrane may show but a trifling departure from the normal and yet the septicemia may be otogenic.

The middle ear is a very important port of entry for the streptococcus. Every one is fa-

miliar with those cases of sepsis which come secondary to a more or less violent otitis media, localizing in the mastoid process and in which the invasion of the blood stream may not be suspected until surgical intervention reveals a sinus thrombosis or some other equally grave complication. But for the purposes of this paper, I wish to use the term sepsis to denote those symptom groups or diseases which result from general invasion of the body by infectious organisms or their toxins, in which the blood infection or intoxication is predominant in the clinical pictures. The otitis media, which is starting point of the process, may be acute or chronic and with or without perforation of the tympanic membrane. The lateral sinus may become involved in rare cases, without symptoms or signs of the mastoid involvement and with only the systemic symptoms and congestion of the upper segment of the tympanic membrane to suggest the true state of affairs.

The role that the middle ear infections play in affecting the health of the infant and young child is possibly somewhat different from that of the para-nasal sinuses. The middle ear and its accessory cavities, the pneumatic spaces of the mastoid process and the petrous pyramid, are cavities lined with mucous membrane, rich in blood supply, adjacent to large blood vessels and other important structures, with an extensive and well developed lymph drainage system, and easily sealed off from the other by inflammatory swelling of the mucosa, and all from the natural drainage orifice into the epipharynx.

It is not necessary to do more than mention that the infection of the lateral, petrosal or cavernous sinuses, from the middle ear or mastoid, may give the typical picture of septicemia, although almost symptomless cases are observed from time to time because of early closure of the internal jugular vein by a sterile thrombus. Aside from sinus thrombosis there is the danger of extension from the necrotic process to nearby vital structures, the labyrinth, cranial nerves, intra-cranial vessels, meninges and the brain.

Friedenwald and Breitstein state that they have observed involvement of ten out of twelve pairs of cranial nerves due to extension of otitis



media, namely, the optic, the common ocular motor, the trigeminal, the external ocular motor, the facial, the acoustic, the glosso-pharyngeal, the vagus, the spinal accessory and the hypo-glossal. Gradenigo described in 1904 a syndrome which bears his name: suppurative otitis media, paralysis of the ocular motor and intense temporo-parietal pain. He explains this syndrome by the extension of the suppurative process to the petrous portion of the temporal bone, at which level it would press, due to the inflammation of the dura in Dorello's canal affecting the sixth nerve and at the same time making pressure on the Gasserian ganglion.

Greenfield Sluder describes a syndrome of the sphenopalatine ganglion composed of neuralgia around the eye, ear, root of the nose, throat and palate; hemi-anesthesia of the nose and palate; paresis of the velum palatinum; gustatory disorders of the middle third of the tongue on the affected side. The lesions of the facial nerve are the most frequent complication of otitic affections. This is due to the proximity of this nerve to nearly all sections of the ear.

Otitis media and mastoiditis may give origin to numerous ocular phenomenon some of which constitute true ocular complications and others correspond to intracranial processes of otitic complications. By bacterial emboli or thrombosis of the ocular arteriols there may occur multiple retinal hemorrhages, epi-sclerotic nodes, iritis choroiditis and pan-ophthalmitis. By venous congestion of the retina in complete thrombosis of the lateral sinus, there may occur from the slightest edema to intense papillitis. Orbital cellulitis with multiple ophthalmoplegias may occur by the propagation of extra-dural abscesses along the whole length of the middle cranial fossa to the orbit through the inferior orbital fissure.

The sinus infection problem is of interest not only to the rhinologist, but also to the general practitioner who comes in contact with these cases daily and recognizes and refers them to the otolaryngologist for treatment. The general pathologic products of accessory nasal disease may be absorbed directly into the lymph or

blood streams, whence they are carried to distant parts of the body giving rise to a general septic state which may be either violent or mild. When the blood stream or lymph channel is once invaded from an infective focus, persistence of its evil effects is the rule, even for a considerable time after the original source of such infection has been eradicated. Indeed after new foci are once established, elimination of the original source of the disease may have but little effect on the severity and progress of the complication. Attention should, however, be called to the fact that the several foci of infection in the head other than the nasal sinuses may be involved either separately or together on the production of any general complication. For example, an arthritis may be the sole and direct result of a suppurating antrum, or it may be due partly to the antrum and partly to a co-existent tonsil infection. Observers and writers on general medical subjects are more familiar with focal infections arising in the teeth, tonsils, gall-bladder, etc., for the reason no doubt that the latter sources are more easily investigated. Hence, they have most often assigned the cause of general complications to sources other than the sinuses. The number, size, and location of these sinuses and the frequency with which they are diseased makes it certain that with the possible exception of the ear and its labyrinth of associated cells, the nasal sinuses stand first among infective foci responsible for serious complicating diseases. Internists have been foremost in their investigations of focal infection and to them credit is due for many recent advances in etiology and treatment. The subject still deserves wider recognition for it is true beyond question that serious and even fatal disease not infrequently originates solely in the labyrinth of the paranasal sinuses. It is equally true that many ailments originating in these foci, while not immediately serious or fatal, finally become so, and are meanwhile a menace to the comfort and well being of those so afflicted.

All complications of sinus disease are due primarily to previous bacterial invasion of the one or more sinuses. Every cause operating to produce the primary sinus infection is, there-



fore, a cause of the complication. Since but a comparatively small percentage of cases of sinus infection are followed by complication it becomes necessary to seek reasons for its occurrence in some but not in all. Such reasons are based either on the character of the anatomy of the given sinus or upon the virulence of the invading bacteria. The main reasons are, therefore, either anatomical or pathological. The situation of the sinuses at the top of the respiratory tract, wholly above the digestive apparatus, favor the entrance by gravity of septic material from the sinus into the pharynx, larynx, and the bronchial tree, or into the stomach and intestinal tract.

Evidence is offered that may be considered suggestive of the role of the intestinal tract in producing such toxemia, the intestinal pathology being apparently secondary to and dependent upon infection in the nasal chambers and accessory sinus cavities. Gravity is therefore, at least in part, often responsible for certain respiratory and gastro-intestinal complications. In the presence of a sustained para-nasal sinus infection, one might expect then, that from repeated bacterial dosage through swallowing post-nasal muco-pus, there would occur bacterial growth in the intestinal tract of the identical pathogenic strains found in the infected sinuses. Such a growth over a wide area should logically result in considerable production of toxins, the absorption of which might well give rise to general manifestations of infection. Parkinson in his investigations of the cultures of nasal and rectal bacterial flora made of each patient found that there was apparently more than a casual similarity in the pathogens grown from these two areas in each case. These findings seem to suggest that intestinal infection may occur secondary to infection of the para-nasal sinuses and may play an important part in the production of the toxemia of sinus disease.

The cerebral affections are the most dangerous complications of the inflammatory diseases of the accessory sinuses. They concern changes of the dura and pia mater, the brain substances or simultaneous change of several of these organs. Consequently these changes result in extra-dural and intra-dural abscess, pachy-men-

ingitis and lepto-meningitis as well as regional brain abscess. A not infrequent form of extension of the inflammatory products is that resulting from thrombo-phlebitis. Only a relatively small number of cases of serious meningitis with recovery have been observed.

In the medical literature of a century ago various eye disturbances were attributed to "snuffles" or some similiary vague intra-nasal disease. While there has been a steady accumulation of data on the relationship between eye disease and nasal infection, it was but recently that anything like a scientific explanation could be made. This naturally followed the epoch making study of Onodi in 1908 on the anatomical relationship between the accessory sinuses and the optic nerve and later contributions by Loeb, Skillern, Sluder, De Schweintz and others. It was not however until radiography had reached its present stage of development that infection within the various sinuses could be definitely located and excluded. The sinuses, owing to their intimate relationship with the orbit, have been considered the most common source of eye infections. Thickening of the orbital periosteum by infection within adjacent sinus is frequently the cause of persistent edema of the lids, conjunctivitis, keratitis, scleritis, uvelitis, choroditis, cyclitis, retrobulbar and optic neuritis. The most important of the eye disturbances arising from infections in the sinuses are those involving the optic nerve. This is largely due to the fact that the optic nerve is particularly susceptible to the actions of toxins. The focus of infection in many instances is located with great difficulty.

The anatomical relations between the optic nerve and accessory sinuses are of vital importance. Onodi investigated the relationship thoroughly and his findings furnish the anatomic foundation for the theory of blindness from accessory sinus disease. He demonstrated by several distinct anatomical findings the possibility of double-sided and contra-lateral blindness from one-sided sinus infection. Our observations, Onodi says, have shown that the wall between the last ethmoid cell and the canalis opticus is nearly always as thin as tissue paper, dehiscences in the walls of the accessory cavi-

ties have been found, where the diseased mucosa may come into direct contact either with the dura mater or the optic nerve sheath.

We may say, in summarizing the situation, that each mucous lined cavity, bony or otherwise, of the head, is a potential focus either directly or indirectly and in searching for such a focus, the combined knowledge, skill and patience of the interist, general surgeon, pathologist and roentgenologist are needed, due to the fact that the co-operation between all of these is a prime requisite to the better management of such cases, so that no portion will be overlooked. Every part of the pharynx and fauces should be examined with care. It is not enough to know that a tonsil operation has been performed. The fossae must be examined for stumps, tags, regrowths, and small crypts concealed behind the pillars or beneath scar tissue, compensatory hypertrophies of the lateral folds, and isolated lymphatic masses in the posterior pharyngeal wall containing crypts filled with presumably infectious material, infected adenoids remnants, often surprisingly large and the commonly overlooked lingual tonsils and infra-tonsillar lymph nodes. These tissues may all be primarily infected, may cause acute infection of the accessory sinuses, and prolong chronic infections of the cavities. These tissues are frequently secondarily infected by sinus drainage, causing in their turn focal infection either toxic or actual elsewhere. We should carefully examine the ear for any slight change in the drum membrane either in color, light reflection, or position and slight drooping of the posterior-superior canal wall, as it may be the only indication of a virulent middle ear or mastoid infection. Slight difference in trans-illumination of the sinuses, change in the color or appearance of the nasal mucosa, the observation of even the small quantities of pus or mucus in the middle or superior meati, after the application of negative pressure, or in the chordea and drooping behind the palate, light bogginess of the turbinates, the cytologic and bacterologic study of maxillary sinus washings, may give the clue that leads to the discovery of a chronic almost symptomless sinus infection. Laryngitis, tracheo-bronchitis, bronchiectasis and other

lower respiratory infections are often caused by gravity extension of infected secretions from these areas, as well as by direct extension downward of inflamed mucosa. Efficient treatment of the nose and throat not uncommonly results in a cure of an intractable case. Some allergic conditions have their origin in the sinuses and the throat. Many affections of the joints—both acute and chronic—kidneys, gastro-intestinal tract, the heart, the eyes, the blood and the glandular system are due to focal infection, no matter how the latter may be defined, and it seems safe to say that the majority of these may originate in the upper respiratory tract.

#### REFERENCES

1. Coates, George M.: Focal infections in early childhood as seen by the otolaryngologist. *Penn. Med. Journ.* 389:392, 1932.
2. McFarling, A. C.: Streptococci septicemia with middle ear as the infection atrium. *Jour. Okla. St. Med. Asso.* 308-309, 1930.
3. Greene, Joseph: The ear, nose and throat in relation to general diseases. *Jour. Med. Asso. of the St. Ala. and the St. Bd. of Health*, 89:94, 1931.
4. Parkinson, Sidney N.: Bacteria in sinus disease. *The Laryngoscope*, 140:148, 1935.
5. Hutchings, E. P.: Some phases of focal infection from the viewpoint of oto-laryngology. *Texas St. Jour. of Med.* 615-618, 1930.
6. Castex, Mariano: Infeccion focal (La Infeccion del oido) *La Prensa Medica Argentina*, 731:742, 1931.
7. Friesner, Isidore: Acute systemic infections from the ear. *Bulletin of the New York Academy of Medicine*, 1:13, 1931.
8. Jackson and Coates: *The Nose, Throat and Ear and their Diseases*, 1929.
9. Nissen, H. Archibald: Tonsils as foci of systemic infection. *Transactions of the American Academy of Ophthalmology and Oto-laryngology*, 313:386, 1934.

### CONSERVATIVE TREATMENT OF DISEASES OF THE EAR, NOSE AND THROAT\*

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It would be impossible in the time allotted to this paper to present a comprehensive survey of the conservative treatment of diseases of the ear, nose and throat, hence your essayist has chosen to consider the trend of oto-laryngological thought as regards therapy in the light of the more recent research findings. Much work has been done in recent years on the histopathology and physiology of structures under

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consideration which may force the abandonment of some of our older methods of treatment. Modification of many others seems assured.

The defense mechanism of the organism has been studied and much learned. To strengthen this mechanism when threatened by disease, is the role of conservative treatment.

It has been found that the defense mechanism of the nose and para-nasal sinuses consists chiefly of two factors, movement of the cilia and thin mucinous layer that envelopes them, and the phagocytic action of the micro, and macrophages and the reactions of natural immunity both local and general.

During a period of normal function the bacteria present are caught in the mucinous layer and removed to their destruction by the action of the cilia of the epithelial layer. Of the factors that tend to break down this defense, we must consider faulty diet, body chilling, poor ventilation, trauma, improper drainage, metabolic irregularities and allergic states. One or more of these factors working together cause a slowing of ciliary movement, the organisms allowed to mass for attack; the mucosa is invaded; secretions become stagnant; the sinuses become involved and a vicious circle is established. Conservative treatment in this instance would consist in, viz.: 1. A determination if possible of the offending factor or factors. 2. Restoration of proper drainage and ventilation. 3. Re-establishment of ciliary movement. 4. Destruction of offending bacteria and their toxins. Careful history taking will frequently show us the cause of the lowered resistance and suggest its proper treatment.

Recent investigations have shown that many of the agents used in the past either slow or destroy ciliary action, and tend to further break down our natural defenses. Of these, solution adrenalin, menthol, thymol and eucalyptol have a depressing effect upon this action. Ephedrine in 3 per cent solution and cocaine in solutions of 5 per cent or less and the mild silver protein solution would from these studies seem to be more available for use as they are less injurious to this valuable physiologic function. Application of solution ephedrine to the swollen mucosa

and especially in the region of the sinus ostia serves to shrink the mucosa; hence improving ventilation and drainage without disturbing the action of the cilia will be found helpful. Drainage may be further improved by the use of cotton packs saturated in 10 to 20 per cent solution of the silver proteins, argyrol being more commonly used for this purpose. Stagnation within the sinuses may sometimes require their removal by irrigation either by way of the natural ostia or by puncture of the sinus wall. In the event the defense mechanism is impaired frequent recurrences may be prevented by the use of vaccines, either stock or autogenous. The latter have been of the greater value to the writer in the handling of these cases. Diets and preparations containing the vitamins A, B and D are highly recommended.

It is obvious that when these conservative measures have failed; when the sinus mucosa has undergone marked hyperplastic or metaplastic changes and is no longer able to free these cavities of infectious materials, surgical replaces medical treatment as a conservative procedure.

The allergic conditions are receiving a great deal of attention in our medical literature. A discussion of their treatment could not be attempted in a paper of this length. For their efficient handling, it requires the closest cooperation of the internist, allergist and otolaryngologist. Their careful study and treatment along purely scientific lines should precede the types of local treatment that serve only to relieve and sometimes result in a destruction of mucosa that by the suggested conservative would have been restored to normal function.

Any discussion of pharyngeal therapy must take into consideration the differences in function and structure of the three anatomical divisions of the pharynx. In the naso-pharynx the same ciliated epithelium is found that is present in the nose and sinuses. The stronger solutions that may be used on the squamous celled epithelium of the oro-and hypo-pharynx would neither be indicated nor tolerated. For therapeutical discussion it is best to consider the naso-pharynx as a continuation of the nose



as regards structure and function, and the same general consideration of therapy observed.

The mucosa, in addition to handling the toxic products of its own inflammatory reactions, must in addition care for those of the sphenoid and post ethmoidal cells, and not infrequently are the secretions from the frontal and maxillary sinuses discharged downward over this mucosa to the throat. Often adenoid congestion or hypertrophy complicate the problem. Especially is this so during the earlier years of life. In acute naso-pharyngitis ephedrine solution by its vaso-constrictor action improves drainage and ventilation. Argyrol or neo-silvol provide slight astringency and are antiseptic. Liquid guaiacol in olive oil or glycerine is both sedative and antiseptic and is excellent for topical application.

Acute infections of the oro-pharynx may be treated with the stronger antiseptics as the squamous celled epithelium is more resistant to these agents. Hot gargles and douches are of value, probably more from the effect of heat than from their chemical content. Systemic treatment is probably of more importance than the local care in acute tonsillitis or pharyngitis. From clinical observations Vincent's angina is becoming more prevalent. Applications of Fowler's solution of arsenic with frequent gargling of warm bicarbonate of soda solution will be found satisfactory in most cases.

It is no longer believed that the tonsils and adenoids should be removed without any definite reasons for the procedure. If they become hypertrophic to the point of being obstructive or prove to be chronically infected, then thorough removal is the most conservative treatment.

The tendency of the laryngeal mucosa to become edematous during acute inflammatory reactions would suggest a word of caution in the treatment of such conditions. Mildly sedative and antiseptic preparations should only be used for direct instillation. The more irritating preparation should be avoided. Three per cent creosote in olive oil is particularly effective.

The conservative handling of acute and chronic suppurative otitis media and acute involvements of the mastoid cells would seem of

the greatest interest to the medical practitioner.

The crying need of the acute ear is drainage and this does not necessarily mean tympanotomy. In the absence of severe pain, a bulging tympanic membrane and marked febrile symptoms the mouth of the Eustachian tube should be attacked first, attempting to drain the tympanic cavity through the natural route, the tube. Applications of solution ephedrine or neo-synepherine to that tubal orifice; followed by 10 per cent solution of one of the silver proteins oftentimes will produce satisfactory drainage and a rapid subsidence of symptoms. Mastoiditis is at present believed due more to the violence of the invading organisms and the character of the cellular structure of the mastoid process rather than to delayed tympanotomy. The above is not to be construed as opposing an indicated tympanotomy but a warning against ill advised incisions of every reddened drum membrane. In the event the mastoid becomes involved during acute otitis too early surgical interference is to be avoided unless the symptoms present make it imperative. The delay of a day or two and often a week or two enhances the chances of a successful operation. An early skiagram is advised, not so much to determine the amount of involvement of the cells as to determine their character. If found sclerotic, mastoiditis is not expected; if diploic, osteo-myelitic in character; if pneumatic, a coalescent mastoiditis of the most usual type.

The success of any conservative treatment of chronic otorrhea is dependent chiefly upon the skill and patience of the otologist. A great deal of time must be given many of these ears to carefully cleanse and to determine the exact location and character of the lesion in the tympanic cavity. Such ears, however, should be given the advantage of such care unless there are evidences of a present or impending intracranial lesion. For the latter, radical mastoidectomy with or without labyrinthine drainage becomes the conservative procedure.

Malignant growths may attack any of the structures of the ear, nose and throat. Some are so located that complete surgical removal is impossible. Cointard's method or modifica-



tion of his method of fractional irradiation prolonged over a period of time offers renewed hope to these sufferers. Many of the most malignant neoplasm types are found to be most radio-sensitive. Biopsy should be preceded or immediately followed by irradiation. This is likewise true of all surgical procedures.

In closing, am quoting from a recent paper of Babbitt's: "In this transitional period, with the prospect of great awakening from scientific research, now well in hand, it behooves clever otolaryngologists to stand in the front rank, grasp proven guide posts and at least present the conservative rather than the surgical trend of mind".

#### DISCUSSION

Dr. C. A. Weiss (Baton Rouge): Gentlemen, I want to thank the essayist for giving me the privilege of discussing his paper. Conservatism is an extremely good measure when applied to any field of medicine. When applied to our own field, in which so many surgical indications are present, I think it is doubly applicable.

The essayist covered very nearly everything in his paper, so I think the only thing I can probably do is to endorse everything he has said.

When we consider that the nose and throat are the gateways of the respiratory system, through which must pass those gaseous elements so essential to our existence and the modifying influences of warmth and moisture exerted upon the inspired air by the tissues of the nose and throat to make it acceptable to our lungs, it behooves us to temper our surgical procedures in these regions with conservatism.

Careful observation and study of our cases considering the smallest enumerated details, evaluating all extrinsic and intrinsic contributing causes, individual, hereditary, environmental, industrial, constitutional allergic or otherwise. Watchfulness over hygienic surroundings, at school, home and at play. Dietetic supervision and regulation, both from a nutritional and adequate Vitamin standpoint. Not too dogmatic but regulated in such a way as to eventually produce the desired results. There is usually a not sufficient variety in the diet of children with too great leaning to the favorites of childhood. Remedial therapeutics indicated by the sympthology of each individual case. Lastly surgical proceedures, directed conservatively to assisting rather than radically destructive to the normal tissues and natural defenses of the body.

There are unfortunately many patients to whom

the ostentatious surgical procedures appeal more than the more modest therapeutic ministrations. It is against these individuals who seek what they term the quickest way that we must guard ourselves.

Preconceived diagnosis on the part of the patient, parent or friend and intimated diagnosis and remedial measures by the attending physician or medical friend, must not influence the otolaryngologist in the careful painstaking examination of his patient.

In the nose, drainage is not wholly dependent upon gravity and position as is plainly exemplified in the location of the natural outline of the maxillary antrum. The movement of the secretions is largely dependent upon the natural functioning of the ciliary tissue. The action of the cilia is modified or entirely checked by varying stages of inflammation, mechanical or traumatic destruction, and the viscosity of the secretions. It has also been demonstrated that the reticulo-endothelial cells of the sinus mucosa have phagocytic powers. Dr. L. W. Dean has called our attention to the existence of sinusitis in children of one and two years of age. If this condition is neglected, or should become chronic by repetition it will result in a change in the character of the nasal and antrals mucosa. Instead of the normal ciliated columnar epithelium, the tissues assume the character of stratified epithelium and the cilia gradually disappear. The secretion from stratified epithelium is thick, mucopurulent, ropy and tenacious. It is this pathological secretion which drops into the naso-pharynx, covers the posterior pharyngeal wall, tonsils, larynx and bronchi, spreading infection in its contact, and responsible for a train of symptoms wrongly blamed upon an innocent pair of tonsils or adenoid.

A routine tonsillectomy and adenotomy in these cases will often prove disappointing to doctor and patient.

Conservatism in sinus surgery has fully demonstrated its justification in better functioning and less troublesome noses, compared to the ever dry, scabbing, abnormally functioning noses and nasopharynxes of a few years ago when surgery in this region was more radical than that of today.

Dr. Hans Schroeder (New Orleans): The late Dr. Lynch said in 1927 that five years from then not so many tonsillectomies would be done, but last year nearly 12,000 such operations were performed in Charity Hospital alone. Indeed, medical progress is slow.

Rabinowitch of Montreal (Tr. Am. Acad. Ophth. 37:65, 1932) says that "one cannot with certainty differentiate between normal and diseased tonsils without microscopic examination of tissue. Infection of the tonsils may be obvious, but the infec-

tion may be so well localised that there is little or no absorption of toxic material, with little or no effect upon the general metabolism. Failure to note improvement of many conditions for which the tonsils were removed during the world-wide epidemic of tonsillectomies may probably be explained by such harmless foci of infection."

Dr. William A. Wagner (New Orleans): I want to apologize for discussing another paper, but thus far Dr. Hume's paper is the most interesting paper that I have heard before the section meeting. I have enjoyed it more than any other paper I have heard. I say I have enjoyed it more because it is conservative. A lot of men might believe that I am radical. We have the radical surgeon and we have the conservative surgeon. I have been getting a little astray, probably, in the minds of a number of men in their belief that I am radical. I have done the pansinusectomy, which constitutes the eradication of the mucosa from all of the sinuses on one side, in one operative procedure. That in the minds of some seems to be a radical operation. In my mind it is conservative, in that nothing else is going to suffice in getting that patient well. Consequently I institute that as conservative, but you might call it radical treatment. I believe we should make a discrimination between conservative and radical, and no matter whether the procedure when indicated is minor or considered conservative or major and considered radical we should call it rational treatment. I believe rational treatment is the proper treatment for sinusitis.

I believe when a sinus infection has reached a certain stage in its pathologic process where recuperation can no longer take place, the sooner we can get that out of that sinus the sooner we hope to get a better patient. I believe in those instances we are forced to subject those patients to a radical type of procedure in the minds of some physicians, but in my mind, rational treatment. I am a conservatist, not a radical. I do not believe in being radical. But I believe our big problem today is not how to handle the type of sinus that will not recuperate under any form of treatment, but how to avoid those cases which come into the category of recuperable lesions of the sinuses from entering into the group that necessitates complete removal.

That type of patient is the one type we are confronted with today, that we should abolish. We should abolish that patient, prohibit him from entering into the category that needs the eradication of the mucosa. That group is by far the largest number of sinus patients today. That is the group which in previous years had the tinkering surgery,

the incomplete surgery, the surgery upon the one or more sinuses in the face of the other normal sinuses which forced the patient not toward the road to recovery but toward the road of radical surgery. And I think it is that group that Dr. Hume has in mind. And I really enjoyed that paper, because we should get behind that group of patients and we should get them well. Our problem is how can we do it, and I believe that one of the avenues of approach is the building up of the resistance organism, from the standpoint of the humoral factor and the cellular factor. We should build up the resistance of the patient in the light of the histiocytes and the other phagocytic round cells, the lymphocytes and the polyblasts, and so on.

I believe there might possibly be some future in the pathogen selective vaccines that Solis-Cohn brought to our attention last year at the American Medical Association, and I think we should try them. It is the only selective vaccine method described in Kolmer-Krumer's Laboratory Technic. I think that is one of our future avenues of approach for these patients whose mucosa are recuperable, to not let them get into the stage where it takes a so-called radical procedure to get them better. I think if we could handle all those patients that way we could abolish my pansinusectomy. I mean that. But who is going to keep the patient from being negligent and from reaching into the category of the metaplastic, the far-advanced hyperplastic, the degenerative and the atrophic mucosa. Who is going to do that? It is up to all of us, and at least I feel that I am going to make my attempt at it, and I am going to use the resistant part of the organism, the constitutional factor with which to do it. I am going to try Solis-Cohn's suggestion of Kolmer's selective vaccine method. I have been trying it, and I have some confidence in it.

Dr. Otto Joachim (New Orleans): I have been in the practice for quite a number of years, nearly fifty years, and I used conservative treatments at the beginning and went to the radical and went back to conservative again.

The paper of Dr. Hume was an excellent one, and it is to be commended not only to the specialists but also to the general practitioners, in order to avoid the recommendation for operative procedure which has been in a way forced upon us in many instances by the general practitioners.

When the general practitioner looks for a focal infection and does not find it, he asks us to remove the tonsils. As Dr. Elliott suggested, there have been more tonsils removed in the last ten

years than in the last two thousands years. How many of these tonsils should have been removed and should not have been removed is a matter of individual judgment. For myself, I take the point of view that we should not remove any tonsils and the specialist should not remove any tonsils until there is an actual and practical reason for doing so. Just the mere presence of the tonsils is no reason for their removal. As has been brought out by Dr. Hume, very often the infection of tonsils or of the teeth is of no danger to the system. This does not apply only to the tonsils. It applies to the paranasal sinuses as well. There is probably less reason to interfere with the paranasal sinuses unless they are pathologic than with the tonsils. In the nose we have to deal with a physiologically important functional apparatus, and the preservation of that function is one of great importance often to the patient. I endorse and do not dispute the necessity of operative interference when necessary. There are many cases where the changes have become so intense and so aggravated that the removal of the ethmoidal sinuses or the radical maxillary operation of the sphenoid operation is indicated and unavoidable. But in many other cases such measures as Dr. Hume advocated will bring about a satisfactory result, if we give our patient the benefit of a thorough constitutional examination, a thorough constitutional observation over some length of time, investigating all possibilities of pathology and not forgetting the preservation of physiological function.

The removal of much of the mucosa of the nasal membranes is very important, because it does interfere very largely with the physiological functions. The use of the physiological functions can often be preserved by what Dr. Hume has emphasized and I try to emphasize, and the practical point of his paper is to do away with that furor of desire to operate almost any case that presents itself, as we have up to recent years quite often observed. The tendency of those with more mature minds and long observation in these diseases of the upper respiratory tract shows that the conservative measures often bring results not only comparable but superior to those results in the cases that have been operated upon.

As to the question of the ear, there we have very often, as the former speakers have also noted, a condition of transient congestion, particularly in the earaches of children, which need not necessarily be at once subjected to a paracentesis of the dull membrane. I often observed patients to whom radical procedure has been recommended and urged and have refused it. If you see them a

year or two afterwards they are practically well. Temporizing has cured earaches. We should just temporize it until we are sure that there is not only an accumulation of infectious material but of infectious material in the middle ear which is dangerous and progressive. In all the other cases we can temporize and see if that is not one of those cases of earache which will often subside in a day or two.

I will close with a recommendation that all of you will consider the very admirable paper presented by the doctor to the best of your ability, and consider also that we who have had long years of observation are highly conversant with it and favor it.

Dr. M. P. Boebinger (New Orleans): Mr. Chairman and Gentlemen: I want to congratulate Dr. Hume on his splendid paper. Conservatism is worth thinking about, more especially when I recall having read some years ago of the promiscuous slaughtering of tonsils. It makes one think it is wise for us now to consider conservatism.

The doctor brings out some very important points in the treatment of nose cases. I want to add just one little stunt that I use, and that is to place a pack beneath the middle turbinate, with a string on the end of it, or, better, a No. 8 thread. This pack is saturated in anything that you may choose. You will find it advisable to dip this into a little adrenalin and some cocain, adding a little antipyrin, to prolong the time, and then you may dip it into a little argyrol. I sometimes use a half of one per cent of silver nitrate.

The pack is placed beneath the middle turbinate, with the string extending from the end of the nose, and the patient or parent is told to remove it about 4-6 hours afterward. I get better results by doing that rather than placing the pack temporarily while the patient is in the office.

The use of the suction apparatus was not mentioned by Dr. Hume, and I hope that I will not be misunderstood when I say I believe I am the first man in the United States who used it, as it is now used. I do not mean the old bulb that was originally brought out by Dr. Coffin in New York. I use it from the age of four, on up. At the age of four the sinuses are considerably developed and the use of the suction apparatus will give splendid results. Thorough shrinking of the mucosa before the use of the suction will assist materially.

Dr. J. Raymond Hume (New Orleans): I want to thank all of the doctors for their fine discussion of this paper, and I do not believe I have any

particular remarks to make about any of the statements.

I should like to emphasize in closing that I believe the research that is being done in this country and abroad, and much of it is being sponsored by the American ear, nose and throat organizations, is going to bring some real results. With the cooperation of the physiologists and the bacteriologists and the internists, we are rather hopeful of the future.

The only question with regard to the treatment

was a question that Dr. Boebinger brought up. I did not mention the use of suction and I did not mention the use of adrenalin, because in the light of some of the newer researches anything that interferes with the submucosa and its mucinous envelope is going to interfere with the natural defense. If we are going to agree with the physiology as a fundamental from which we must get our ideas of therapy, we are going to have to agree that the things we have proven are going to interfere with natural defenses should not be used.



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## MEDICAL ECONOMICS

Some personal observations of health insurance in England leave very definitely the impression that health insurance has some very decided advantages, but which are, on the other hand, offset by many disadvantages. In favor of the English method of dealing with the indigent sick and the low income group, is the fact that the doctors receive at least some

monetary return for the time and for the brain work that they spend on the indigent and those just above the indigent group. The returns, however, are small, and in order to obtain a living wage it is necessary for the physician to have a large panel which obligates him to do a tremendous amount of work, work which must be done very often in the evening and at night, so that there is little leisure for study or reading or recreation. The feeling among the better English practitioners is that panel practice is deadening. The long hours and the large number of patients leave little time for anything but the most routine and perfunctory type diagnosis and treatment. The medicine as practiced is, to say the least, not high grade. The patients receive a minimal amount of attention and a large number are handled in comparatively short time. While this is a criticism which can not be disputed, it must not be forgotten in many of the large medical and surgical clinics of the big cities of the United States much the same type of medicine is practiced.

Another deadening influence is the life long tenure of the job as a panel physician. This is a criticism which holds true of many physicians who hold positions which yield them an assured livable income for their life time, unless some very gross violation of medical ethics or of medical practice makes them medical outlaws. The person who has such a position very often is quite content to go along in a groove, not advancing any possibly if not retrogressing, at least standing still.

Another complaint is that the doctor is so definitely under the thumb of a lay executive. This is certainly one of the great objections that the medical profession of the United States has to the governmental control of sickness. The non-medical person is not qualified to decide questions which have to do with health and illness. On the other hand, it is possible that they may be better qualified than the physician to handle the social problems that are bound to come up when the poor man is taken ill. Certainly the physician in any scheme or plan to take care of the large number of the population who are unable to pay physi-

cians' fees should have the chief say and adequate representation on the controlling body, although of course other groups must be represented.

Another fault with the insurance scheme is the abolition of the personal physician-patient relationship. The patients on a physician's panel, it is true, have a certain freedom of choice in the selection of their physician, but this is theoretic rather than factual. They pretty much have to go to the nearest and most available panel physician, who realizes that this is the case. Such obligations do away with the personal relationship of patient and physician. Loss of a whole-hearted trust in the professional skill and honor of the doctor is a distinct psychological disadvantage to the ill man. Our medical profession in the United States realizes this and above everything else is insistent upon the maintenance of that friendly and dependable relationship which should exist between doctor and patient.

Organized medicine should lead public opinion in promulgating plans for insuring against sickness. They should have a very definite and positive leadership in such schemes. It is up to all of us to help mold public opinion, by the spoken and written word, as to the importance of medicine, initiating and controlling any plans which have to do with governmental assistance in the care of the indigent and the low income group.

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#### THE GEOGRAPHIC INCIDENCE OF STREPTOCOCCUS DISEASE

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It has been shown by numerous statistical papers that rheumatic fever is common in the North, in the cold sections of the world, and relatively rare in the tropic regions. The recent study of Seegal and his co-workers\* is of particular interest in that three important

streptococcal diseases, rheumatic fever, scarlet fever, and acute nephritis are contrasted in their incidence in hospitals as far North as Canada and as far South as the Charity Hospital and Touro Infirmary in New Orleans. They show that at least of the three diseases caused by hemolytic streptococcus, rheumatic fever in latitude 50°-45° may make up as much as five per cent of the total admissions to the hospitals, whereas in latitude 34°-29° the average is well under one per cent, a striking difference in incidences in the disease according to the latitude. Scarlet fever likewise is very much more common in the North than it is in the South, and the incidence of these two diseases in different latitudes is graphically illustrated most convincingly in this article. However, the occurrence of acute glomerulonephritis in southern latitudes is almost identical with that in northern latitudes. As a matter of fact, there is very little difference between the groups of hospitals in the North, Central, and South latitudes. These authors also draw attention to the fact that the incidence of the first two streptococcal diseases is greatest in the winter. That glomerulonephritis is a streptococcal disease has been quite well substantiated in the past, but further evidence comes from Longcope's Clinic\* at Johns Hopkins. In a publication in which infection and nephritis are discussed, workers there note that of 78 cases of hemorrhagic nephritis all but 11 showed a casual relation to hemolytic streptococci. The ultimate prognosis in these cases seemed to depend largely on whether or not the preceding infection which antedated the succeeding nephritis was an acute or chronic expression of infection which, parenthetically, is usually in the upper respiratory tract. The nephritis of acute infection with an acute onset, apparently as a result of prompt development of resistance to the infection, gave a very much more satisfactory prognosis than those cases of nephritis which developed during the course of chronic infection.

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\*Seegal, David and E. B. C., and Jost, Elizabeth L.: A comparative study of the geographic distribution of rheumatic fever, scarlet fever and acute glomerulonephritis in North America, *Am. Jour. Med. Sci.*, 190:383, 1935.

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\*Winkenwerder, Walter L., McLeod, Newt, and Baker, Myles: Infection and Hemorrhagic Nephritis, *Arch. Int. Med.*, 56: 297, 1935.

Seegal in the concluding sentence of his article states that "The variance in the geographic distribution of these diseases, based upon the limited data, presents a problem in specific host and bacterial interaction." May it not be that rheumatic fever and scarlet fever, representing two types of acute reaction to infection with the hemolytic streptococcus, are

furthered in the North by such factors as close confinement, intimate contact, absence of sunlight, and exposure to cold, and hence are more frequent diseases in the colder localities, whereas acute glomerulonephritis, in the South at least, represents reaction to infection which may be largely chronic and not precipitated by social conditions as are the other two diseases?

## HOSPITAL STAFF TRANSACTIONS

J. T. NIX CLINIC  
New Orleans

At a meeting held in September, Doctor Lucy S. Hill presented the following paper.

### THE ETIOLOGY OF EPILEPSY

Epilepsy, a disease known to the ancients as "The Sacred Disease", is in many cases still as mysterious and baffling to the modern physician as it was in the Dark Ages, despite the advances and researches of modern medicine. The scope of the term epilepsy, however, has been gradually narrowed as more and more causative factors have been found which serve to furnish the exciting element and this in turn removes one more group from that large group which we now designate as the epilepsies or as essential epilepsy.

The matter of the cause of the epilepsies has been and still is a field where speculation has been rife, many theories advanced, and much research work done in the attempt to find the causative agent behind the epileptic attack, which may vary from a mere momentary loss of consciousness to a violent generalized convulsive seizure. Repeated postmortem examination of the brain and cord of epileptics by competent investigators has not given us a characteristic pathological picture which would enable us to designate epilepsy as a definite organic disease of the central nervous system. Because of the apparent fruitlessness of research along this line, many men have turned their attention and efforts in another direction and at present we have various theories being presented.

Several years ago the idea was advanced that the production of an alkalosis with its accompanying water logging and anoxemia would produce convulsive seizures in susceptible individuals. If this were true, then the production of an acidosis with its accompanying dehydration and increased oxygen tension in the tissues should serve to prevent the appearance of epileptic seizures. Experimental work along this line of thought has been done by many clinicians.

Lyon and Dunlap approached the matter from four aspects. The first patient was used as a control; the second was given a ketogenic diet; the

third, a dehydration diet; the fourth, a ketogenic diet and luminal; and the fifth, a dehydration diet and luminal. In all four there was a diminution of major seizures and occasionally an increase in the number of minor seizures. The addition of luminal seemed to be more efficacious than either the ketogenic or dehydration diet alone. They concluded that treatment by means of dehydration or ketogenic diet was not particularly encouraging in adults and that as a treatment to be given in the home was very difficult unless the patient was unusually intelligent and co-operative. The results of other physicians in the treatment of epilepsy in children by means of the ketogenic diet or dehydration method or both, under hospital regime, have been more encouraging. H. R. Coedler has reported that 34 per cent of the children in his series showed improvement and 50 per cent showed freedom from attacks. Helmholz and Keith, after experimental work with the ketogenic diet covering a ten year period, report success in 40 per cent of their cases.

James Collier has advanced the theory that all epilepsies are due to some underlying metabolic dyscrasia peculiar to the individual plus some secondary factor, such as a cerebral lesion, uremia, or intoxication of some sort. He divides the community into three divisions—(1) those in whom no metabolic dyscrasia is present and therefore no seizure can be provoked; (2) those in whom the metabolic fault is present to a minor degree and secondary factors such as intoxication of some sort will provoke seizures; (3) those in whom the metabolic dyscrasia is present in a high degree—this third class giving those known idiopathic epileptics. Collier also noted the presence of alkalosis where attacks were frequent, the disappearance or decrease of attacks in the presence of acidosis, and a sudden drop in blood pressure accompanied by facial pallor. In view of the above he advances the suggestion that the epileptic attack may be a protective action by nature to avert a dangerously falling blood pressure and alkalosis. The customary idea now of epileptic seizures as due to a loss of function either local or general in the higher centers also permits the



explanation of convulsions and hallucinations as a release phenomenon.

Valuable contributions to the study of epilepsy have been made by Spangler in his study of the relationship of epilepsy to allergy. He finds clinical, hereditary, immunologic and therapeutic evidence which points to allergy as the causative factor. Hypersensitiveness to cow's milk was often the etiological factor in the development of infantile convulsions. This is substantiated by the fact that out of 62 breast fed infants, 12.9 per cent had infantile convulsions, while out of 38 bottle fed infants, 63.1 per cent had convulsions in infancy. In these groups, bottle feeding appeared to be a more important factor than difficult or instrumental delivery, as out of 20 instrumentally delivered babies, 10 were breast fed and 30 per cent of these had convulsions, while 80 per cent of the 10 bottle fed babies had convulsions. During food substitution in infancy, convulsive seizures sometimes occurred, and in these cases Spangler usually found some allergic hereditary and some other allergic manifestations as a cyclic diarrhea, digestive disturbance, hives, eczema. The rather frequent beneficial effect of a ketogenic diet in these cases is attributed by him to chance elimination of the offending substance rather than to the production of an acidosis. Where a definite history of allergy is present but the substance cannot be determined at the time, desensitization with a non-specific protein is often helpful. J. Klein has also reported several cases in which relief of the allergic condition also brought cessation of convulsive seizures. In one case, a child three years old, presenting hay fever and convulsive seizures, there was found sensitiveness to several types of cheese. Elimination of cheese from the diet resulted in relief of the hay fever and elimination of the convulsive seizures.

A. Souqui, differing from the above theories, regards epilepsy as a primary histologic and biologic condition of the nerve centers plus a toxic substance in the blood stream. Salmon considers epilepsy a disturbance of the sympathetic system causing the choroid plexus to secrete an excess of cerebrospinal fluid, thus increasing the intraventricular tension.

It is particularly important that the association of convulsive seizures with endocrine disorders be recognized. The pituitary, the thyroid, parathyroids, gonads, and adrenals may be important factors in the production of convulsions.

A number of cases of epilepsy associated with a pituitary syndrome has been reported by Cushing. Lowenstein has reported that about 30 per cent of epileptics gave evidence of some pituitary dyscrasia. Some showed evidence of adiposogenitalis, others evinced sexual over or under develop-

ment, and often there was x-ray evidence of changes in the sella. The cases of epilepsy which show improvement or even complete cessation of attacks during pregnancy are interesting in that they give weight to the theory of pituitary influence over convulsive seizures. During pregnancy the secretory activity of the anterior lobe of the pituitary is increased and the vasoconstrictor response to the posterior lobe extract is also increased. Thus the effect of the pituitary on the centers in the diencephalon is increased, explaining its helpful effect on the frequency of the convulsions. The fact that there is sometimes a decrease in convulsions following oophorectomy may be explained on the basis that there is an increase in pituitary activity with a resulting increase in the pituitrin content of the cerebrospinal fluid. Turner reports four cases having convulsive seizures, ranging from 12 to 28 years, who presented some evidence of pituitary dyscrasia as girdle obesity, dystrophia, adiposogenital syndrome and menstrual irregularities associated with the classical pituitary type of individual. All improved on pituitary therapy, as antuitrin, antuitrin-S and anterior and posterior pituitary substance. Experimentally hypophysectomy in animals is accompanied by the onset of convulsive seizures. These seizures in turn, according to Hournsny, may be controlled by pituitary implants. Altenburger and Stern have also found that the cerebrospinal fluid of epileptics contains a decreased amount of pituitrin.

Parathyroid tetany occurs as evidence of an increased irritability in both nerve and muscle tissue and is due to a lowered calcium balance. The blood calcium is decreased and there is clinical evidence also to indicate hypoparathyroidism. Administration of calcium plus diet and parathyroid gives improvement.

Hyperinsulinism is definitely associated with convulsive states. These cases improve promptly under increased carbohydrate feedings, high fat diet or injections of pituitrin. The adrenals also are associated with convulsive seizures, as in narcolepsy, myasthenia and Addison's disease, injection of adrenal cortex giving relief in these cases.

Although there are other etiological factors and other theories concerning the etiology of epilepsy, the above emphasize the necessity of a complete physical, neuropsychiatric and endocrinological examination of any patient complaining of convulsive seizures of any type. The diagnosis of idiopathic epilepsy on insufficient grounds has condemned many patients to a life of hopelessness—they become morose and hypochondriacal, a burden to themselves and to their families and friends.



THE OSCAR ALLEN TUMOR CLINIC  
CHARITY HOSPITAL  
NEW ORLEANS

The scientific meeting of September was called by Dr. James T. Nix, Director. The essayist was Dr. John Connell, who presented the following paper.

TRANSITIONAL CELL CARCINOMA

Among the various pathologic expressions that we frequently encounter is transitional cell carcinoma. Histologists in describing epithelial tumors have named them from what they believe to be their site of origin. Thus basal cell tumors are believed to arise from the small basal cells that are the mother or progenitor of the upper epithelial cells. Squamous cell tumors arise from epithelial tissue which commonly have as their outermost layer stratified squamous cells. They are recognized most readily by their tendency to form pearls and show cornification. Adeno or glandular carcinoma supposedly arises from epithelial cells that commonly have as their function secretory activity and are recognized by their glandular formative activities.

Now certain tumors that are readily recognizable as epithelial tumors yet do not show any of the specific characteristics of the layers already mentioned appear in various epithelial beds in the body. For many years they have been given names most of which were taken from the various layers of epithelium—thus spinocellular carcinoma, stratum granulosum carcinoma, and devious other confusing expressions that have been assigned to them at various times. All these expressions were meant to indicate that various individuals believed their origin to be from this particular cell layer in the epithelium.

A term has gradually crept into the literature and is mentioned by Martzloff<sup>1</sup>, Cutler<sup>2</sup>, McCarty<sup>3</sup> and many other more recent writers which is more inclusive and takes in all these epithelial tumors with no definite mature characteristics. It is a transitional cell carcinoma and from the previous indicative remarks it is seen to include all the tumors arising from the epithelial structures between the basal and squamous layer of cells. For one to be sure of anything like this, however, he would have to have much knowledge as to the etiology, origin and biology of cancer in general.

The name transitional cell carcinoma is of value, however, because there are certain facts that we do know about this tumor. First, we recognize it in the microscope as a rather definite histologic picture. The sections show many small, round and polyhedral cells with relatively large hyperchromatic nuclei which occupy almost the entire cell. The cell membranes are vague and

the cytoplasm, usually scanty in amount, stains poorly. The cells vary markedly in size and staining qualities, show numerous mitotic figures, and grow diffusely in cords and sheets to infiltrate the surrounding tissues. At times anaplasia is present to a most marked degree, so much so that the epithelial characteristics are almost lost and the tumor begins to resemble a sarcomatous growth. It is this type of tumor which has been frequently reported in the literature as carcinoma sarcoma and sarcoma of the cervix uteri.

These tumors may be found wherever epithelial tissue is present, but the most common and important source is the oral cavity and the cervix uteri. They include the largest proportion of tumors found in these areas which are such frequent sites of malignant growths. Grossly they have no special distinguishing characteristics except that the primary growth is frequently very small, and apparently insignificant. The actions of this tumor, whether in the mouth or uterus, are very similar. It grows rapidly and may metastasize to the regional lymph nodes early. A small lesion on the buccal mucosa may be noticed only after a diligent search for a cause of cervical lymph node enlargement has been made.

The clinical importance of recognizing this type of tumor becomes extremely pertinent when we learn more concerning its therapeutics. Years of experience have finally taught us the usual futility of surgical intervention. It only too frequently leads not to a cure but to a more rapid dissemination of the malignant cells throughout the body. This type of tumor on the other hand is very radio-sensitive. Its very anaplastic and embryonic characters give us this information from the histologic standpoint. Proper radium and deep Roentgen therapy, the amounts of which are beyond the scope of this paper, will inevitably result in a rapid dissolution of the tumor without sacrificing even the tumor bed. Such phenomena are the rule and not the exception in our cervical and mouth transitional cell carcinoma when seen in the early stages of the disease.

CONCLUSION

In conclusion let me repeat—there are certain tumors most commonly met with in the oral cavity and cervix uteri which we term transitional cell carcinoma, which have typical histologic characteristics, are usually very anaplastic, which are readily amenable to radium and roentgen therapy if discovered early.

REFERENCES

1. Martzloff, John Hop. Bull., 40:171, 1927.
2. Cutler, Arch. Surg., 18:2303, 1929.
3. McCarty, Am. Jour. Cancer, 20:403, 1934.

## VICKSBURG SANITARIUM STAFF MEETING

A regular monthly meeting of the staff of the Vicksburg Sanitarium was held, Monday, September 9, at 6:30 P. M., with fourteen members of the staff and two guests present. After a supper, the meeting was called to order by the president, Dr. R. A. Street, Jr.

Reports from the record department and analysis of the work of the hospital for the month of August were presented.

Dr. F. Michael Smith, director, Warren County Health Department, presented a report of vital statistics for the month.

The following special case reports were presented:

1. Chronic Urinary Infection Arising from Ureter Containing Calculus, Residual to Former Nephrectomy; Ureterectomy.—Dr. A. Street.

2. Cholelithiasis with Cholecystectomy Complicated by Embolic Pneumonia; Recovery.—Dr. J. A. K. Birchett, Jr.

3. Cholelithiasis.—Dr. R. A. Street, Jr.

Selected radiographic studies were shown and discussed as follows: Osteomyelitis of astragalus; tuberculosis of hip joint; osteoarthritis of lumbosacral joint; pulmonary tuberculosis (3 cases); aneurysm of thoracic aorta; cholelithiasis; cardiospasm; carcinoma of descending colon; ureteral calculus; twin pregnancy.

Three-minute reports of the literature of the month were given as follows:

1. Dr. A. Street—Ober Method of the Treatment of Sciatica.

2. Dr. L. S. Lippincott—High Blood Urea Nitrogen Not Due to Chronic Nephritis.

The next meeting of the staff will be held Thursday, October 10.

Leon S. Lippincott,  
Secretary.

Abstract: Cholelithiasis.—Dr. R. A. Street, Jr. Patient.—White, female, age 40; married; admitted to hospital August 19, 1935.

Chief Complaint.—Pain under right scapula; gaseous distention after meals; nausea for past three days; has vomited several times.

Present Complaint.—For past four years has had attacks of "indigestion" after heavy meals, much gaseous distention, nausea, pain under right scapula, and occasional vomiting. Never jaundiced and never has had clay colored stools. Bowels sluggish except when purgative taken. No fever, cough, sweat or loss of weight. Appetite good except during acute attacks. Occasional dull headache, usually with indigestion.

Past History.—Seven children living and well, two dead. No miscarriages. Menstruation every

three weeks for past two years and flow rather profuse with some pain first two days of flow. Mild leukorrhea at times. Venereal disease denied.

Physical Examination.—Well developed and well nourished white woman, apparently in considerable pain. No jaundice noted. Some tenderness in upper right quadrant of abdomen but no rigidity or masses. Numerous carious teeth, some broken; gums red with dirty grey film around teeth margins. Tongue heavily coated and breath foul; pulse 90, of fair quality; temperature 99°F.; blood pressure 110/70. Pelvic floor slightly relaxed; large hard cervix with old bilateral laceration and small erosions on anterior and posterior lips. Fundus of uterus forward and free but slightly enlarged. Thick muco-purulent discharge from cervical canal. Adnexa negative. Laboratory findings essentially negative.

Procedure.—Intravenous glucose solution and calcium gluconate daily for four days. Operation on fourth day showed a chronically diseased gallbladder with numerous stones. The cystic duct was ligated and gallbladder removed. No stones felt along the common duct and this was not further explored. Four Penrose drains were placed along the gallbladder fossa and wound was closed in usual fashion.

Convalescence was rather stormy for the first four days postoperative. Because there was complaint of weakness and chilliness several times and a rise of temperature at two successive forty-eight hour intervals, twenty grains of quinine were given intramuscularly for two days and five grains of quinine were given by mouth three times a day. Plasmodia could not be demonstrated in the blood. Improvement was then rapid and nourishment was taken from the fifth day on. Discharged on the seventeenth postoperative day in excellent condition. Wound had healed nicely.

Pathological report showed chronic cholecystitis with 19 calculi, varying from pinhead to the size of a pea.

Abstract.—Chronic Urinary Infection Arising from Calculus-Bearing Ureter, Residual to Former Nephrectomy.—Dr. A. Street.

Patient.—White, male, age 44; married, no children; merchant; admitted to Vicksburg Sanitarium August 20, 1935.

Chief Complaint.—Urinary frequency; some tenderness; abdominal discomfort, left lower quadrant. Duration two months.

Present Illness.—First seen one year ago with complaint of burning and frequent urination and pain along course of right ureter. Cystoscopic examination at that time showed right kidney and ureter normal. Bladder urine contained pus. Prostate not enlarged; prostatic fluid contained pus. Left kidney had been removed; left ureter con-

tained stone. Treated by prostatic massage and instillation of silver nitrate solution, and symptoms improved.

Previous Illness.—Gonorrhea 24 years ago; no urethral discharge since. No syphilis. Left kidney removed three years ago because of acute suppurative disease.

Physical Examination.—Well developed, stout patient not acutely ill. Temperature 98.8°F.; pulse 76; respiration 17; blood pressure 126/80. General examination shows nothing remarkable. There is a left nephrectomy scar. First and second glasses of urine very turbid. Rectal examination shows prostate to be of normal size and consistency.

Cystoscopic Examination.—Cystoscope easily introduced; bladder tolerance good. Bladder mucosa appears normal. There appears to be pus oozing from left ureter. Right ureter easily catheterized, 31 cm. No residual urine in right pelvis and there was normal flow of clear urine. Catheter passed into left ureter and slight obstruction 3 cm. up. Another catheter was passed through the left orifice alongside the first one, and after manipulating the two, one of them passed the obstruction and was passed up the ureter for 30 cm. Roentgenograms were made, first with only the catheters in place, then left ureterogram. Former showed a calculus 3/8 inch long at 3 or 4 cm. from the bladder. The latter showed in addition to the calculus the ureter only moderately enlarged, extending to the site of what was the kidney pelvis before nephrectomy. Bladder neck and posterior urethra appeared normal. Prostatic fluid found to be free of pus.

Clinical Laboratory.—Blood Wassermann (three antigens), Kline and Young, Kahn, and Eagle flocculation tests negative. Blood counts normal. Bladder urine (catheterized): cloudy, alkaline, slightest possible trace of albumin, no sugar; pus++, no blood.

Urine from right ureter: Slightly cloudy, slightly acid, trace of albumin; rare leukocytes; many fresh red blood cells. Stained preparations: Rare leukocytes (polymorphs), some Gram positive diplococci. Culture: Some Gram positive staphylococci (albus).

Blood urea nitrogen: 14.01 mg. per 100 cc.

Impression.—It was thought at first that the prostatic infection was the probable cause of the urinary symptoms. However, later observation showed the prostate free of pus, the bladder with a heavier infection, and discomfort in the region of left ureter instead of the right, with no evidence of trouble in the right kidney or ureter. It was, therefore, concluded that the left ureter with the calculus obstructing its lower portion was serving as a reservoir for the infection.

Operation.—August 22, 1935, gas ether anesthesia. A catheter was introduced into the left ureter and 2 cc. of 1 per cent aqueous solution of mercurochrome was injected. Left lumbar incision extending well down along course of ureter. Peritoneum easily deflected mesially exposing the ureter paraperitoneally. Upper end was first freed, catheter withdrawn through the urethra and then the ureter freed to a point below the calculus and close to the bladder where it was clamped, ligated,



Showing Calculus in Ureter



divided, and removed. Penrose drain and closure of wound to exit of the drain.

Course.—Convalescence uneventful for one week, then development of small area of pneumonia in right lower lung with temperature 103°F. Pneu-

monia promptly subsided and temperature was normal after the 14th day. Patient was discharged free of symptoms on September 11, twenty days after operation. At this time urine showed only 1 pus cell per high power field.

## TRANSACTIONS OF ORLEANS PARISH MEDICAL SOCIETY

### CALENDAR

OCTOBER 2 Clinico-Pathological Conference, Touro Infirmary, 11:15 A. M. to 12:15 P. M.

OCTOBER 2 Mercy Hospital Staff, 8 P. M.

OCTOBER 4 Pathological Conference, Hotel Dieu, 11 A. M. to 12 Noon.

OCTOBER 7 Eye, Ear, Nose and Throat Hospital Staff, 8 P. M.

OCTOBER 9 Touro Infirmary Staff, 8 P. M.

OCTOBER 11 Pathological Conference, Hotel Dieu, 11 A. M. to 12 Noon.

OCTOBER 11 French Hospital Staff, 8 P. M.

OCTOBER 14 ORLEANS PARISH MEDICAL SOCIETY, 8 P. M.

OCTOBER 15 Charity Hospital Medical Staff, 8 P. M.

OCTOBER 16 Clinico-Pathological Conference, Touro Infirmary, 11:15 A. M. to 12:15 P. M.

OCTOBER 16 Charity Hospital Surgical Staff, 8 P. M.

OCTOBER 17 Eye, Ear, Nose and Throat Hospital Staff, 8 P. M.

OCTOBER 17 New Orleans Hospital Council, Eye, Ear, Nose and Throat Hospital, 8 P. M.

OCTOBER 18 Pathological Conference, Hotel Dieu, 11 A. M. to 12 Noon.

OCTOBER 18 I. C. R. R. Hospital Staff, 12 Noon.

OCTOBER 21 Hotel Dieu Staff, 8 P. M.

October 22 Baptist Hospital Staff, 8 P. M.

OCTOBER 23 Clinico-Pathological Conference, Touro Infirmary, 11:15 A. M. to 12:15 P. M.

OCTOBER 25 Pathological Conference, Hotel Dieu, 11 A. M. to 12 Noon.

OCTOBER 28 ORLEANS PARISH MEDICAL SOCIETY, 8 P. M.

OCTOBER 30 Clinico-Pathological Conference, Touro Infirmary, 11:15 A. M. to 12:15 P. M.

During the months of July, August and September the Society was in vacation, therefore there was little activity in the Secretary's office.

The members are urged to report their new office addresses to the Secretary's office in the event they have moved during the last few months.

H. B. Alsobrook, M. D.,  
Secretary.

## LOUISIANA STATE MEDICAL SOCIETY NEWS

### AMERICAN MEDICAL DIRECTORY

After every Directory is published we receive a number of complaints from physicians who have not been listed as Members or Fellows of the American Medical Association. Some of these men have possibly lost appointments with industrial firms, insurance companies, railroads, etc., because they were not indicated as members. They may have been members and let their membership lapse or new men in the community who failed to join their local society in time to indicate this information in the Directory.

To eliminate such criticism, we are asking Secretaries of State Medical Societies and Editors of State Medical Journals to cooperate in notifying all delinquents and eligible applicants that a new Directory is going to be published. It would aid greatly if a notice were placed in your publication calling to the attention of your readers the importance of sending in their data promptly when requested and the keeping up of their membership in your Society.

It will probably be two years, or 1938, before another Directory will be issued.

Thanking you for your assistance in this matter, we are

Very truly yours,  
American Medical Association.

### THE COUNCIL ON PHYSICAL THERAPY

The Council of the American Medical Association on Physical Therapy have prepared a pamphlet entitled "Apparatus Accepted." This has to do with various types of physical equipment that physicians may employ in the treatment of disease, such as lamps, inhalators, diathermy apparatus, and metabolic testers. Copies of this may be secured from the American Medical Association.

### AMERICAN MEDICAL ASSOCIATION RADIO PROGRAM

Beginning October 1st, every Tuesday at 4:00 P. M. a radio program of the American Medical Association will be broadcast over the N. B. C.



network. These programs might well be turned on the radio in doctors' offices when patients are waiting. Likewise, the doctors might inform patients that the radio programs will be heard at the time mentioned above.

The program is to be devoted to medical emergencies, the center of which is the doctor who is available day and night for the protection and promotion of his patients' health.

#### ST. TAMMANY PARISH

The St. Tammany Parish Medical Society met September 13, Southern Hotel, with the following members present: Drs. Frank Young, Carl Young, Lawrence Young, R. B. Paine, H. E. Gautreaux, H. D. Bulloch.

The following guest physicians were present: Dr. Dan S. Silverman, Dr. Manuel Garcia, Dr. Louis Ochs and Dr. C. E. Gorman, all out of New Orleans. Dr. J. T. Nix of New Orleans was expected to be present but was sick and could not be with us, much to the regret of the Society.

Before going into the scientific papers, Dr. Bulloch presented a very interesting clinical case that he had present. Mr. \_\_\_\_\_ who had received a severe stab wound in the chest, February 23, 1933, and who had been continuously under treatment of various surgeons in different hospitals ever since, and who was totally incapacitated and probably would be for some years to come.

Dr. Garcia was then called on for his paper, who chose as his subject, "The Role of the General Man in Cancer Control". Lantern slides were used to bring out the points of special interest in his lecture. The subject was very ably handled, making what he had to say and show us of great interest and very impressive.

Dr. Dan Silverman next addressed the Society, his subject being: "Bacillary and Amebic Dysentery." Dr. Silverman soon convinced his hearers that he was master of his subject. Dr. Silverman also used the lantern slide to bring out the high points of his discourse. Dr. Ochs and Dr. Gorman assisted Drs. Garcia and Silverman in handling the lantern slides.

Before adjourning, Dr. Frank Young made a motion to elect the visiting physicians to membership in our Society. Motion was put and unanimously carried. Refreshments, generously supplied by Dr. Frank Young, were enjoyed fully. Meeting adjourned, peace and harmony prevailing.

Dr. Carl Young, Pres.

Dr. H. D. Bulloch, Sec.

#### APPROACHING MEETINGS

The American Public Health Association will hold their annual convention in Milwaukee, October 7-

10. Ten other closely related organizations will meet at the same time. They include such associations as the American Association of Industrial Physicians, Association of State Sanitary Engineers, Conference of State Laboratory Directors, and others. An extremely comprehensive and interesting program has been provided.

The Eighth Annual Graduate Fortnight of the New York Academy of Medicine will be held October 21 to November 2, 1935. The sessions will be devoted to diseases of the respiratory tract. The complete program of this meeting is in the office of the Journal, and is available for any one who may be interested in attending this conference.

The Mississippi Valley Medical Society will meet in Quincy, Illinois, October 2-4, 1935.

#### BRANCH SOCIETY OF AMERICAN ASSOCIATION FOR CANCER RESEARCH ORGANIZED

The first Branch Society of the American Association for Cancer Research to be organized in the South resulted here on August 13 when the Tumor Clinic staff of the Shreveport Charity Hospital met with other physicians and elected Dr. E. L. Sanderson, Supt. of Charity Hospital their President; Dr. W. R. Mathews, pathologist, Vice-President; and Dr. Harold G. F. Edwards, radium and x-ray therapist, Secretary-Treasurer.

The aim of this Society will be to assist the National Association, composed exclusively of physicians and scientists, in advancing research into the cancer field, whether by experimental, pathological, clinical, statistical means, or otherwise. The Society is expected to activate and concentrate interest in these widely removed centers where distance prevents participation in the regular meeting of the mother association.

The Shreveport Charity Hospital Branch Society will envelope the Arkansas-Louisiana-Texas area and draw its membership from the medical profession in this territory who are interested in the prevention, study and treatment of cancer. It is the intention of the Society to conduct special scientific programs relating to cancer and to have outstanding cancer specialists to come before the Society frequently during the year and conduct special clinics on cancer.

The next meeting of the mother association will be held in the Mallory Institute of Pathology, Boston City Hospital, Boston, Mass., April 8, 1936. The meeting of the Shreveport Branch will be announced at a later date.

#### NEWS ITEMS

Dr. Robert A. Strong of New Orleans was a

guest speaker at the Southern Tuberculosis Conference and Sanatorium Association on Monday, September 16, at Houston, Texas.

Dr. J. H. Musser addressed the Michigan State Medical Association in Sault St. Marie, Michigan, on September 24.

Medical Director H. E. Hasseltine has been relieved from duty at San Francisco and assigned to duty at Carville, Louisiana, in charge of the Leprosarium.

Dr. O. E. Denney, who has been in charge of this hospital for many years, is to report for duty at Ellis Island, New York, about November 1st.

Surgeon P. J. Gorman has been assigned to duty in New Orleans Quarantine Station, Algiers, La.

Among the Diplomates qualified by the American Board of Psychiatry and Neurology at their meeting in Philadelphia were:

Dr. Dean Hume Duncan in neurology, Shreveport, La.

Dr. Walter Jos. Otis in psychiatry and neurology, New Orleans, La.

#### HEALTH OF NEW ORLEANS

The Department of Commerce, Bureau of Census, reports that for the week ending August 17 there were in the city of New Orleans 140 deaths, divided 83 white and 57 colored. The death rate for the whole group was 15.2, for the white 12.7 and for the colored 21.3. The infant mortality rate for this week was 89, divided about equally between the two races. For the following week there was a slight increase in the total number of deaths, there being 147 with a death rate of 15.9. There were 89 deaths in the white population, the rate being 13.6 and 58 negroes, with a rate of 21.7. The infant mortality was 107. The following week there was some slight drop, there being 12 less deaths reported than in the previous week. This week there was a corresponding decrease in the death rate, the rate being 14.6. Of the two races, the white had a rate 10.4 as the result of 68 deaths and the colored a rate of 25.0 with 67 deaths. Mortality rate among infants this week was 95, with a perfectly astounding variation between the two races, the white rate being 19 while the infant mortality rate of the negroes was 221. For the week ending September 7, there were fewer deaths in the city than had been reported in a long time. There were 116 deaths, 80 white and 36 colored. The death rate for the week as a whole was 12.6, for the white population 12.2 and for the colored 13.5. The infant mortality rate was 65, the colored rate being approximately twice as high as the white.

#### INFECTIOUS DISEASES IN LOUISIANA

Dr. J. A. O'Hara, Epidemiologist for the State of Louisiana, has furnished us with the weekly morbidity reports for the State of Louisiana, which contain the following summarized information: For the week ending August 17, the thirty-third week of the year there were reported in double figures the following diseases: 228 cases of malaria, 42 of pulmonary tuberculosis, 27 pneumonia, 23 cancer, 22 syphilis, 20 each typhoid fever and gonorrhea, 13 each influenza and diphtheria, 11 each of hookworm disease and septicemia. Of the typhoid fever cases Orleans Parish led with 6 followed by DeSoto with 4. Union Parish reported 6 cases of scarlet fever. Four cases of poliomyelitis were reported throughout the state from 4 different parishes. Two cases of typhus fever were reported in Orleans Parish. The thirty-fourth week of the year ending August 24, there were reported 223 cases of malaria, 42 of pneumonia, 31 of pulmonary tuberculosis, 28 each of syphilis and cancer, 22 each of gonorrhea and typhoid fever, 19 of influenza, 12 of diphtheria and 11 of measles. During this week there were reported six cases of poliomyelitis, 3 from Orleans Parish, 2 from Iberia Parish and 1 from Livingston Parish. For the week ending August 31 the number of cases of malaria increased to 265. There were reported also 91 cases of syphilis, 61 of gonorrhea, 38 of pneumonia, 32 of pulmonary tuberculosis, 29 of cancer, 24 of diphtheria, 20 of influenza, 18 of typhoid fever, and 10 of scarlet fever. During this week there was reported 1 case of poliomyelitis from Rapides Parish. The typhoid fever cases were reported in parishes all over the state and not one listed more than 2 cases. In the thirty-sixth week of the year which ended September 7, there was a rather slight drop in the number of cases of malaria, there being 169. From the report the week seemed to be a rather healthy week. The other diseases reported were comparatively few in number, being tabulated 35 cases of pneumonia, 31 of cancer, 29 of pulmonary tuberculosis, 25 of typhoid fever, 23 of diphtheria, 17 of influenza, and 10 of syphilis. Two cases of poliomyelitis were reported this week. Of the typhoid fever cases St. Landry Parish reported 8 and Tensas 6. For the last week for which we have reports, ending September 7, malaria again leads all reportable diseases, there being 220 cases in this week. Other diseases reported in double figures are 58 cases of pneumonia, 30 of cancer, 22 of pulmonary tuberculosis, 19 each of gonorrhea and influenza, 17 of typhoid fever, 14 of syphilis, 10 of diphtheria. One case of poliomyelitis was reported from Orleans Parish. Acadia Parish was the only one to have more than 2 cases of typhoid fever reported in this week. It should be noted that in five weeks, which comprise the above reports, malaria was by far the most frequently reported disease. This is a re-

flection on us as physicians, because of all the transmissible diseases malaria control depends largely upon the physician's individual attention.

#### DIED

Weiss, Carl Austin, Jr., Baton Rouge. Born on December 18, 1905, in Baton Rouge; graduated from Tulane University School of Medicine in 1927. Dr. Weiss interned at Touro Infirmary, the American Hospital in Paris, and the Bellevue Hospital, New York, with graduate study in otorhinolaryngology in Vienna. He was a member of the East Baton Rouge Parish Medical Society, Sixth District Medical Society, and the Louisiana State Medical Society. He died in Baton Rouge on September 8, 1935.

On August 4, 1935, Dr. Benjamin Gilbeau died at his plantation home, on the outskirts of Grand Coteau, Louisiana. He was the son of Valerie Gilbeau and Corinne Guidry, descendants of pioneer Acadian settlers of that section of Louisiana. Dr. Gilbeau was born September 3, 1860, and received his early education at St. Charles College at Grand Coteau, and later, at Sewanee University in Tennessee. He then matriculated at Tulane University and graduated from that Institution in 1885 in the Medical Department. Dr. Gilbeau was in active practice until his last illness, his professional activities covering a period of over fifty years. In addition to the practice of his profession, he was deeply interested and highly successful in farming operations, and the raising of blooded live stock.

#### WOMAN'S AUXILIARY NEWS

Officers of Louisiana State Medical Society Auxiliary:

Mrs. Hermann B. Gessner, President, New Orleans, La.

Mrs. James Byron Vaughn, Pres.-Elect, Monroe.

Mrs. Samuel B. Kreeger, 1st. Vice-Pres., Lake Charles.

Mrs. L. E. Shirley, 2nd Vice-Pres., Jennings.

Mrs. D. T. Milan, 3rd Vice-Pres., Monroe.

Mrs. Harry R. Marlatt, 4th Vice-Pres., Homer.

Mrs. Jos. E. Heard, Treasurer, Shreveport.

Mrs. James W. Warren, Rec. Sec'y., New Orleans.

Mrs. Leonhard E. Devron, Corr. Sec'y., New Orleans.

Mrs. C. E. Rew, Parliamentarian, Shreveport.

#### CLAIBORNE PARISH

The Woman's Auxiliary of Claiborne Parish held their last meeting of 1934-35 on July 15 at the home of the President, Mrs. M. J. Rivenbark, Hay-

nesville, La. A business meeting was held after which Mrs. Arthur A. Herold and Mrs. Joseph Heard of Shreveport were introduced, Mrs. Herold being the guest-speaker for the occasion. She gave a very splendid report of the A. M. A. Convention held in Atlantic City June 11th-14th, and also advised us along the lines our newly organized society should be conducted. Our next meeting is scheduled for September to be held in Homer.

Mrs. H. R. Marlatt, Secretary.

Sept. 20th, 1935.

The following invitation to the Southern Medical Association meeting is extended through Mrs. Lee W. Roe, Chairman of Press and Publicity.

"The Woman's Auxiliary to the Southern Medical Association will meet in St. Louis, Mo., November 20th and 21st. All women attending the Southern Medical Association meeting are invited to the Auxiliary meetings.

Each State Auxiliary is entitled to send its President, two delegates, and two alternates to form, with the Executive Board, the voting body.

Members and eligible members of County Auxiliaries in these states, are very cordially invited to attend the luncheon meeting Wednesday, November 20th at 12:30 P. M., and the annual meeting, November 21st at 9:30 A. M. The business sessions are to be conducted on a schedule, allowing time for social arrangements. For the development of the Auxiliary, it is important for members and eligible women to be present, because the foundation of an organization rests on its membership and future leaderships come from it. So make your plans now to go to this convention. Program data will be sent you very soon."

Below is a letter received from William F. Snow, General Director of The American Social Hygiene Association which embraces some very interesting data:

"The American Social Hygiene Association is facing the greatest crisis it has confronted since the beginning of the World War, when as all members of the Association know, the first really great opportunity to advance social hygiene as a national movement was seized and fully developed with contributions from the Association's friends and supporters. Now, through the Social Security Act just signed by the President, we have another great opportunity to assist Federal and state health agencies to prevent syphilis and other so-called venereal diseases, and promote the environmental safeguards which are so important. Whether the Association will be able to grasp this new and in some ways greater opportunity will depend in a large degree upon you and other members.

The scientific means and methods for the con-



quest of syphilis are quite well understood. Under the Security Act a long step can be taken toward its eradication if all governmental health bodies adopt and carry into action sound and tested plans for dealing with syphilis as a communicable disease. Congenital syphilis, which now causes blindness, deformity, insanity, or other disasters and even death in 2 per cent or more of children born in America, can be prevented by quite simple practical measures. Early syphilis can be rendered non-infectious, general paralysis can be prevented and progress can also be made in the control of gonorrhea by the application of modern methods.

In order to assist governmental health agencies to give social hygiene an adequate place in plans for expansion under the new Federal Act, the Association's staff should be fully available to all health officers and other officials for advisory and executive services and to assist in training new personnel in social hygiene work. But it will be impossible for the Association to grasp these opportunities and render the services required unless funds are supplied to maintain its field activities in all parts of the country.

It is, therefore, to you who are members of the Association and who understand the problems and difficulties of the work that I am instructed by our Board to appeal for aid in meeting the present demands, and I do so with full assurance that you will do your utmost. Much depends upon the help of each member.

Only once before have we made a similar appeal in a crisis. This was during the great Mississippi flood. Our members responded with thousands of dollars which enabled us to carry on the emergency work asked of us by the state and local authorities. Both the demands and the opportunity are greater now. We need a minimum of \$20,000 more this year."

Recommended reading for the month:—  
Worlds Apart.....Princess Marthe Bibesco

Vein of Iron.....	Ellen Glasgow
The Stars Look Down.....	A. J. Cronin
Frost at Morning.....	Beatrice Kean Seymour
South.....	Frederick Wight
All Things are Possible.....	Lewis Browne
Man Of Aran.....	Pat Mullen
These Elder Rebels.....	Helen Abbott Beals
North to the Orient.....	Anne Morrow Lindbergh
Four Winds.....	Roland Pertwee
We, the Accused.....	Ernest Raymond
The Oxen of the Sun.....	Irving Bacheller
One-Two-Three-Four.....	James Hutchison
God Shakes Creation.....	David Cohn
The Wind Blew West.....	Edwin Lanham

When the tang of Fall is in the air, what is more embracing than an evening at home in your favorite comfy chair with a good book? The above books have been recommended as very entertaining. Hope you will enjoy them.

Mrs. George D. Feldner, Publicity Chairman,  
3814 Louisiana Ave. Parkway

Gastonia, N. C.,  
September 22, 1935.

To the Officers and Members,  
Louisiana State Medical Society,  
Gentlemen:

I wish to express my sincere thanks for the beautiful chest of silver that was given to me as a parting gift by the Louisiana State Medical Society. This gift is appreciated more than I can express, as I shall have it always to remind me of the many happy years that I spent with the State Society.

I deeply regretted having to resign my position, as I have always enjoyed my work and association with the doctors of Louisiana so much. I hope that I may be able to attend one of the annual meetings soon, and to see you all again.

Sincerely,  
Mary Crossen Kagy.

## MISSISSIPPI STATE MEDICAL ASSOCIATION NEWS

### MEMBERSHIP

Below are given some figures on membership in the Mississippi State Medical Association as compared with the number of eligible physicians of the state. The membership figures are taken from the Transactions recently distributed; the figures for eligible physicians are taken from a roster of Mississippi physicians compiled by the Mississippi State Board of Health early in this year. There have been, no doubt, some changes since the lists were made up, but it is probable the percentages are still essentially correct.

The Jefferson County and Wilkinson County

Societies head the list with 100 per cent membership. The Clarke-Wayne Counties Medical Society is at the bottom with only five members out of 17 doctors in the two counties, or 29.4 per cent. There are 1,352 presumably eligible doctors in Mississippi and 904 of these are members of medical societies—66.9 per cent.

It has been said by those who favor the single county societies that more doctors are reached and become members of these societies than is the case with the multiple county societies, and the present membership figures bear this out. There are listed 13 single county societies with



a membership of 150 or 80.2 per cent as against 11 multiple county societies with a membership of 754 and a percentage of 64.7.

There are numerous points to be considered in deciding which of the two set-ups is more effective. Organized medicine should attract all doctors with medical degrees and it is presumed that most doctors registered by the state are eligible to membership in the medical societies of the state. In numbers and unity there is strength. Actually it is known that there are a considerable number of registered physicians who are not any longer in active practice and whose interests are in other lines of endeavor. As an example, in one county with 41 registered physicians, there are 27 members of the medical society or approximately 66 per cent. Of the others, four perhaps should be members and nine have other greater interests or have wholly or partially retired from practice. The best possible membership attainable is 76 per cent.

On the other hand, there are a few counties in which society membership is a tradition and all physicians zealously retain their membership until death, whether in practice or not.

It would be interesting to know the attendance percentages of the various societies. Membership on paper does not mean much if a man never attends a meeting of his society. In these days, doctors like many others expect something for their money. Membership dues may not be excessive, especially when compared with dues to medical societies in some other parts of the country, but they mean paying out money usually at a time when taxes and other obligations are due.

It is not difficult to understand why a doctor may feel that society membership is not worth while when his society does not meet at all or only meets at rare intervals or in case the society meets at a great distance from his home, perhaps necessitating a whole day or part of the night away from his practice. If the program is given over to specialists who tell him about conditions he rarely or never sees and suggest that should he see such a case, it should be referred, he may feel that he is wasting his time.

It is probable that the average doctor will be more interested in a program put on by someone who is working along the lines that he himself follows from day to day, if he is asked to discuss himself cases that he himself sees, if he can feel that he is in an environment where he is a factor.

However, it is not easy to see how a single county society of two or four or five members can be really effective.

There is probably a happy medium. Some of our societies may be too small. Some may be too large. Some programs may be devoted too much to out of town or out of state specialists. Some

programs may give too little thought to the bigger accomplishments of medicine. Some societies may not meet often enough to allow their members opportunity for discussion of every day problems. It is believed by some at least that the doctors of Mississippi would be more interested in organized medicine if they could have an opportunity to get together with their fellows at least once a month in places accessible and if programs could be arranged to satisfy the needs of the average doctor.

The Mississippi State Medical Association should have more members. The component societies, whether large or small must attract the men of their jurisdictions. It can be done.

Let's discuss it.

#### MEMBERSHIP BY SOCIETIES

No.	Society	Members	Eligible Doctors	Per Cent Members
1.	Jefferson County .....	6	6	100.0
2.	Wilkinson County .....	6	6	100.0
3.	Harrison County .....	44	48	91.7
4.	Jackson County .....	11	12	91.7
5.	Pike County .....	24	27	88.9
6.	Claiborne County .....	6	7	85.7
7.	Tate County .....	10	12	83.3
8.	Northeast Mississippi, 13 Counties .....	148	193	76.7
9.	Adams County .....	18	24	75.0
10.	East Mississippi .....	72	98	73.5
11.	Clarksdale and Six Counties .....	56	80	70.0
12.	De Soto County .....	8	12	66.7
13.	North Mississippi .....	56	86	65.1
14.	Delta .....	102	158	64.5
15.	Issaquena-Sharkey-Warren Counties .....	36	56	64.3
16.	Tri-County .....	29	46	63.0
17.	South Mississippi .....	83	140	59.3
18.	Central .....	122	206	59.2
19.	Franklin County .....	4	7	57.1
20.	Hancock County .....	6	11	54.5
21.	Winona District .....	45	85	52.9
22.	Amite County .....	5	10	50.0
23.	Stone County .....	2	5	40.0
24.	Clarke-Wayne .....	5	17	29.4
TOTALS .....		904	1,352	66.9

#### SINGLE COUNTY SOCIETIES

No.	Society	Members	Eligible Doctors	Per Cent Members
1.	Adams .....	18	24	75.0
2.	Amite .....	5	10	50.0

3. Claiborne .....	6	7	85.7
4. De Soto .....	8	12	66.7
5. Franklin .....	4	7	57.1
6. Hancock .....	6	11	54.5
7. Harrison .....	44	48	91.7
8. Jackson .....	11	12	91.7
9. Jefferson .....	6	6	100.0
19. Pike .....	24	27	88.9
11. Stone .....	2	5	40.0
12. Tate .....	10	12	83.3
13. Wilkinson .....	6	6	100.0
<b>TOTALS .....</b>	<b>150</b>	<b>187</b>	<b>80.2</b>

## MULTIPLE COUNTY SOCIETIES

No.	Society	Members	Eligible Doctors	Per Cent Members
1.	Central .....	122	206	59.2
2.	Clarke-Wayne .....	5	17	29.4
3.	Clarksdale, and Six Coun- ties .....	56	80	70.0
4.	Delta .....	102	158	64.5
5.	East Mississippi .....	72	98	73.5
6.	Issaquena-Sharkey-Warren Counties .....	36	56	64.3
7.	North Mississippi .....	56	86	65.1
8.	Northeast Mississippi, 13 Counties .....	148	193	76.7
9.	South Mississippi .....	83	140	57.1
10.	Tri-County .....	29	46	63.0
11.	Winona District .....	45	85	52.9
TOTALS .....		754	1,165	64.7

## MEMBERSHIP BY DISTRICTS

No.	District	Councilor	Members	Eligible Doctors	Per Cent Members
1.	Ninth	D. J. Williams..	63	76	88.1
2.	Third	R. E. Caldwell..	148	193	76.7
3.	Eighth	W. H. Frizzell...	92	126	70.2
4.	Sixth	H. Lowry Rush	74	109	67.9
5.	Second	L. L. Minor.....	74	110	67.3
6.	First	J. W. Lucas.....	158	238	66.4
7.	Fifth	W. H. Watson....	164	269	61.0
8.	Seventh	Joe E. Green....	86	146	56.8
9.	Fourth	T. J. Brown.....	45	85	52.9
<b>TOTALS .....</b>			<b>904</b>	<b>1,352</b>	<b>66.9</b>

DIRECTORY AND CALENDAR  
MEDICAL SOCIETIES

(Information is not complete. Secretaries of societies are urged to send in full data so that it may be known when the societies of the state

meet and the names of the officers directing their activities this year).

Adams County Medical Society: E. E. Benoist, Natchez, president; W. K. Stowers, Natchez, secretary. Meets third Tuesday each month, Natchez, 7:30 P. M.

Amite County Medical Society: D. H. Thornhill, Crosby, secretary.

Central Medical Society: W. B. Dobson, Jackson, president; L. W. Long, Jackson, secretary. Meets first Tuesday each month, Robert E. Lee Hotel Roof, Jackson, 6:30 P. M.

Claiborne County Medical Society: E. P. Jones, Hermanville, president; G. W. Acker, Port Gibson, secretary.

Clarksdale and Six Counties Medical Society: J. L. Nichols, Alligator, president; N. C. Knight, Clarksdale, secretary. Meets fourth Wednesday of March and second Wednesday of November, Elks Club, Clarksdale, 2 P. M.

Clarke-Wayne Counties Medical Society: W. P. Gray, Waynesboro, president; Albert Hand, Shubuta, secretary.

Delta Medical Society: P. G. Gamble, Greenville, president; F. M. Acree, Greenville, secretary. Meets second Wednesday of April and October, rotates through five counties, 2 P. M. Next meeting, Moorhead, October 9.

De Soto County Medical Society: A. J. Weisinger, Hernando, president; L. L. Minor, Route 4, Memphis, secretary.

East Mississippi Medical Society: H. L. Arnold, Meridian, president; L. V. Rush, Meridian, secretary.

Franklin County Medical Society: L. Costley, Meadville, secretary.

Hancock County Medical Society: A. P. Smith, Bay St. Louis, secretary.

Harrison County Medical Society: H. K. Rouse, Lyman, secretary.

Issaquena-Sharkey-Warren Counties Medical Society: F. Michael Smith, Vicksburg, president; Leon S. Lippincott, Vicksburg, secretary. Meets second Tuesday each month, Elks Club, Vicksburg, 7:00 P. M.

Jackson County Medical Society: J. N. Lockhard, Pascagoula, president; R. G. Lander, Pascagoula, secretary. Meets second Thursday of March, June, September and December, Jackson County Hospital, Pascagoula, 7:00 P. M.

Jefferson County Medical Society: W. T. Harper, Fayette, secretary.

North Mississippi Medical Society: W. W. Phillips, Oxford, president; A. H. Little, Oxford, secretary. Next meeting October 18, Graduate Building, University of Mississippi, Oxford, 2:00 P. M.

Northeast Mississippi Thirteen Counties Medical Society: S. R. Deanes, West Point, president; A. J. Stacy, Tupelo, secretary.

Pike County Medical Society: H. L. Bauer, Mc-

Comb, president; Elise Rutledge, McComb, secretary. Meets first Thursday each month, McComb, 6:30 P. M.

South Mississippi Medical Society: J. Gould Gardner, Columbia, president; F. T. Bower, Hattiesburg, secretary.

Stone County Medical Society: Earl W. Green, Wiggins, secretary. Meets with Harrison-Stone-Hancock Counties Medical Society.

Tate County Medical Society: W. D. Smith, Senatobia, president; J. Sidney Eason, Coldwater, secretary. Meets second Wednesday each month, Senatobia.

Tri-County Medical Society: H. R. Fairfax, Brookhaven, president; R. B. Zeller, Hazlehurst, secretary. Meets second Tuesday of March, Copiah-Lincoln Junior College, Wesson; June, Walthall Hotel, Tylertown; September, Riverside Hotel, Monticello; December, Whitworth College, Brookhaven; 12:30 P. M.

Wilkinson County Medical Society; E. M. Butler, Centerville, secretary.

Winona District Medical Society: P. B. Brumby, Lexington, secretary.

#### ANNUAL ORATION

Dr. Morris Fishbein will deliver the Annual Oration at Greenville next May. I regard Dr. Fishbein as the outstanding medical orator in the country.

T. M. Dye,  
Secretary.

#### MISSISSIPPI HOSPITALS

##### CALENDAR OF STAFF MEETINGS

Anderson Infirmary: Second Friday, each month, 6:00 P. M.

Eiloxi Hospital: First Friday, each month, 7:30 P. M.

Clarksdale Hospital: Second Wednesday, each month, 1:30 P. M.

George C. Hixon Memorial Hospital: First Monday, each month, 7:30 P. M.

Jackson County Hospital: Second Thursday, each month except July and August, 7:00 P. M.

Meridian Sanitarium: Second Thursday, each month, 6:30 P. M.

Mississippi Baptist Hospital: Third Tuesday, each month, 6:30 P. M.

Northeast Mississippi Hospital: First Monday, each month, 7:30 P. M.

U. S. Veterans Hospital, Gulfport: Every Monday, Tuesday, Wednesday and Thursday, 10:45 A. M.

Vicksburg Infirmary: First Wednesday, each month, 7:00 P. M.

Vicksburg Sanitarium: Tenth or week of the tenth, each month, 6:30 P. M.

Winona Infirmary: First Thursday, each month, 7:30 P. M.

#### MISSISSIPPI STATE BOARD OF HEALTH

During the past few weeks the following counties not having full-time health departments have made appropriations for full-time nursing services to be carried on under the supervision of the county health officers: Marshall, Tippah, Quitman, Tallahatchie, Attala, Oktibbeha, Noxubee, Madison, Newton, Rankin, Claiborne, Simpson, Smith, Covington. Wayne, and George. The program will be educational in nature.

Felix J. Underwood, Executive Officer,  
Jackson.

#### ADAMS COUNUTY MEDICAL SOCIETY

The regular monthly meeting of the Adams County Medical Society was held on August 20 with eight members present.

Dr. J. S. Ullman read a paper on "Menstruation and the Hormones," which was discussed by members present.

Dr. R. D. Sessions gave a description of work observed during a recent visit to the Cleveland Clinic Hospital.

W. K. Stowers, Secretary,  
Natchez.

#### AMITE COUNTY MEDICAL SOCIETY

The Amite County Medical Society has been organized and a charter was granted at the past state medical meeting. We intend to take up our local problems chiefly. We also plan to meet in conjunction with the Wilkinson County Society at intervals and import a stimulating speaker for the occasion.

Our chief common medical problem in this section, along the Homochitto river, is malaria. The great trouble is getting patients to continue quinine sufficiently long enough to effect a cure. Atabrine has not been so successful in this section as a great majority of our cases are chronic with relapses, and although atabrine does check symptoms, in this type of case it is not lasting and has to be followed with quinine and arsenic therapy. We feel at times toward malaria as did Osler toward syphilis—"that it may simulate anything."

Our oldest member, Dr. W. R. Brumfield of Gloster, has shown that the "DOCTOR" still has a place in the minds of the people as a man of judgment outside of the purely medical things as he won the race in the first primary for state representative; winning over five opponents, three of whom were lawyers.

D. H. Thornhill, Secretary,  
Crosby



## CENTRAL MEDICAL SOCIETY

September meeting Robert E. Lee Hotel Roof, Tuesday, Sept. 3, 1935 with supper at 6:30 P. M. Honoring the entrance of Leake County into the Society.

Physicians of Leake County: J. M. Barnett, F. L. Brantley, I. A. Chadwick, J. C. Dodson, C. W. Folsom, W. D. Franklin, J. M. Golden, W. A. Gowan, J. Van Horn, W. S. Martin, J. S. McNeal, H. H. Puryear, P. B. Russell, J. J. Sovell, A. L. Thaggard, B. E. Vowell, B. R. Wood, B. R. Wilson, K. P. Wood.

I am sure most of you will agree that from June until September is a long time between meetings. Makes us all appreciate the good fellowship of each other more. Let's have a big turn out and greet the boys from Leake County with a big crowd. We would like for them to help us out with the October program. We have some new doctors in town—be sure that they are invited to the meeting.

## Program:

1. Case Report: "Removal of Senile Cataract with Interesting Findings," R. E. Anderson. Discussion: A. G. Wilde and M. L. Batson.

2. Case Report: "Compound Fracture of Tibia," F. H. Hagaman. Discussion: T. H. Blake and L. W. Long.

3. Paper: "Incidence of Syphilis in Apparently Healthy Adult Applicants for Positions as Food Handlers," H. C. Ricks. Discussion: B. N. Walker and H. R. Hays.

A meeting of program committee was held in Dr. Adkin's office at 1:00 o'clock, Monday, September 2, 1935.

L. W. Long, Secretary,  
Jackson.

## COAHOMA COUNTY MEDICAL SOCIETY

The Coahoma County Medical Society and the Clarksdale Hospital Staff met in its regular monthly meeting at the Clarksdale Hospital, Aug. 14, 1:30 P. M. The meeting was called to order by the president, Dr. W. S. Slaughter. The secretary then called the roll and read the minutes of the previous meeting, as directed by the president, the minutes being adopted as read.

Committee reports being the next order of business, Dr. E. LeRoy Wilkins, chairman of the committee to formulate policies regarding use of charity wards in the Clarksdale Hospital, reported as follows:

We, your committee appointed to make recommendations with reference to charity patients, and their using the rooms maintained by the county and city, beg leave to report as follows:

It shall be necessary in order to obtain the use of the rooms maintained by the county and City of

Clarksdale, at the Clarksdale Hospital, for the patient to present a statement, signed by two reputable citizens, that he and his family are not able to pay for hospitalization, and this must be signed, also, by a member of the Board of Supervisors, if in the county outside the city, or by one of the three Commissioners if residing in the city.

This shall be evidence sufficient for the admission by the superintendent of any patient.

The above does not apply to "extras", operating room, x-ray, etc., but these expenses must be arranged for by the patient.

It shall be considered ethical, and permissible, for any doctor to accept a fee for caring for patients that occupy the "charity rooms", provided that same shall not come from the patient, or members of his family, but from some charitable organization, welfare agency, or the N. R. A.

Should the doctor be able at some future time to collect monies from the patient or his family for the services so rendered, it shall be his duty to first see that the hospital shall have been remunerated, then the remainder he may retain for his own use, to apply on account for services rendered.

J. L. Levy  
W. H. Brandon  
E. LeRoy Wilkins  
Committee

A motion was then made that the Society adopt this report in full. Motion seconded and carried unanimously. Dr. E. LeRoy Wilkins made a motion that these recommendations be forwarded to the president of the Board of Directors of the Clarksdale Hospital with the request that if the recommendations are adopted by the Board of Directors, a copy of same be sent to every white physician in Coahoma County. Motion seconded by J. L. Levy and passed unanimously.

Under the heading of new business the president appointed the same relations committee to serve another term, namely, T. G. Hughes, chairman, I. P. Carr, D. H. Griffin.

Dr. J. L. Levy made a motion that the secretary write Dr. Maxwell E. Lapham a letter of appreciation on behalf of the Society for the postgraduate course in obstetrics. Dr. E. LeRoy Wilkins amended the motion to the effect that a copy of the letter be sent to the secretary of the committee on postgraduate medical education. Amendment accepted. Motion seconded and passed unanimously.

Dr. T. M. Dye announced that the Mississippi State Medical Association will meet on May 5, at Greenville, next year, which is one week earlier than usual. Dr. Dye also announced that Dr. Morris Fishbein, editor of the Journal of the American Medical Association, has accepted an invitation to



make the annual oration at the Mississippi State Medical Association meeting next year.

The scientific program being next in order and all scheduled essayists being absent a round-table presentation of interesting cases, and discussions of same was entered in to as follows:

1. Use of the Warwick Ionization Machine in the Treatment of Allergy.—E. LeRoy Wilkins. Discussed by I. W. Barrett, J. L. Levy, T. M. Dye, W. S. Slaughter, D. H. Griffin.
2. Some Interesting and Unusual Eye Cases.—E. LeRoy Wilkins, Discussed by D. H. Griffin, J. L. Levy.
3. Age Incidence of Allergy.—I. W. Barrett. Discussed by E. LeRoy Wilkins, J. L. Levy, D. H. Griffin.

N. C. Knight, Secretary,  
Clarksdale.

#### CLARKE-WAYNE COUNTIES MEDICAL SOCIETY

My attention has just been called to an omission of the entire Clarke-Wayne County Medical Society in the 1935 Transactions. This happened in the printing office and was not caught until too late.

The following are members in good standing of the Clarke-Wayne Society and of the State Association:

W. P. Gray, Waynesboro, President.  
B. F. Hand, Waynesboro.  
Albert Hand, Shubuta, Secretary.  
C. D. Barkley, State Line.  
J. A. Smith, Carmichael.

We regret very much that this error occurred, and we are asking you to give this explanation prominence in the New Orleans Medical and Surgical Journal.

T. M. Dye, Secretary.

#### ISSAQUENA-SHARKEY-WARREN COUNTIES MEDICAL SOCIETY

A regular monthly meeting of the Issaquena-Sharkey-Warren Counties Medical Society was held at the Elks Club, Vicksburg, Tuesday, September 10. After a supper served at 7 P. M., the meeting was called to order by the President, Dr. F. Michael Smith, with nineteen members and four guests present.

Scientific Program: General Surgery, Dr. W. H. Parsons, Vicksburg, Chairman.

1. Essential Points in Successful Spinal Analgesia.—Dr. George F. Carroll, Biloxi.

Discussed by Drs. A. Street, Vicksburg and W. K. Purks, Vicksburg. Dr. Carroll closed.

2. Thyroidectomy (Illustrated by Lantern Slides and Motion Picture).—Dr. J. A. K. Birchett, Jr., Vicksburg.

Discussed by Drs. W. K. Purks, and W. H. Parsons. Dr. Birchett closed.

3. Surgery in Relation to Pediatrics.—Dr. W. H. Parsons.

Discussed by Dr. G. C. Jarratt, Vicksburg. Dr. Parsons closed the program.

The meeting closed with a brief business session.

Guests present: Drs. George F. Carroll, Biloxi; Dr. Ira Parsons, Biloxi; Dr. Paul Paden, C. C. C. Camps, Vicksburg; Dr. L. Campos del Toro, Lexington.

The next meeting of the society will be held Tuesday, October 8, at the Elks Club, Vicksburg. The subject will be Radiology and the committee in charge consists of Drs. G. M. Street, D. A. Pettit and B. B. Martin, Jr. The program will be as follows:

1. The Physician's Daily Obligation to Educate the Public about Cancer.—Dr. J. A. Beals, Greenville.

2. Improved Methods in Roentgen Therapy of Malignant Disease.—Dr. A. Street, Vicksburg.

3. Radiology in the Diagnosis and Treatment of Fractures.—Drs. S. W. and W. E. Johnston, Vicksburg.

#### TALLAHATCHIE COUNTY MEDICAL SOCIETY

The Tallahatchie County Medical Society met at the Rotary room in Charleston where, after being served a fish dinner, general discussions were participated in by all present. Malaria was the principal subject. Several doctors related some unusual cases coming under their observation. Those present were Drs. J. D. Biles, Sr., Summer, J. D. Biles, Jr., Parchman, T. E. Clay and J. E. Backstrum, Tutwiler, J. A. Harris, G. D. Hightower, Webb, G. C. Denson, Vance, Henry, Tippo, J. W. Moody, D. G. Bardwell and J. E. Powell, Charleston.

The association of the doctors of any county in a county medical association is worth more than any other one thing to bring the physicians of a county together. I think the physicians of Tallahatchie with a few exceptions are a bunch of the best fellows I ever associated with. It seems that each physician realizes that each other physician is his friend and all work together like brothers.

J. W. Moody, Charleston.

#### ADAMS COUNTY

Dr. Homer Whittington has entered general practice in Natchez, and is located at 405 Franklin Street. He is no longer associated with the Natchez Charity Hospital. Dr. George Townsend has replaced him at the above institution.

Mrs. Edwin Benoist, who has recently entered the Natchez Sanatorium, is now convalescing nicely and will soon return home.

The marriage of Dr. Francis Dixon to Miss Virginia Butler of New Orleans will be celebrated in September. Best wishes to the popular couple, from the medical fraternity of Natchez and elsewhere.

Dr. Sessions, with his family, has recently returned from the Crile Clinic in Cleveland, where he went for treatment of his son, Richard. He gave us a very interesting discourse of his visit at the last meeting of the Adams County Medical Society. Our good wishes go to him and family for the continued recuperation of his son.

Dr. Fred Geisenberger soon leaves for Memphis to complete his medical education. On his return he will be associated with the writer, in practice of eye, ear, nose and throat diseases. He will be accompanied by his wife and mother.

Lucien S. Gaudet, County Editor,  
Natchez.

#### ALCORN COUNTY

The Alcorn County doctors are enjoying the post graduate course in obstetrics given by Dr. Lapham, made possible by the Mississippi State Medical Association, Tulane University, and the Commonwealth Fund. We are having good attendance and much interest manifested.

The Alcorn County Medical Society was honored at the last monthly meeting with the presence of Dr. R. B. Watson, malarialogist for TVA, and Dr. E. L. Bishop, director of health and sanitation for Tennessee Valley Projects, also Dr. S. F. Strange, medical officer at Wilson Dam. Dr. Watson gave us a very instructive resume on the "Mosquito as a Malaria Transmitter." Dr. Bishop told us some things about the program promoting health and sanitation in the Valley. We were glad indeed to come in touch with these highly scientific men and were benefited by their talks.

Secretary Dye of the Mississippi State Medical Association notified me some days ago that Dr. Fishbein, editor of the A. M. A. Journal, will be our annual orator at our meeting in Greenville next May. I feel indebted to Dr. Dye for securing this outstanding speaker for us.

J. R. Hill, County Editor,  
Corinth.

#### COAHOMA COUNTY

Miss Louise Frances, superintendent of the Clarksdale Hospital, spent a very enjoyable vacation in Dallas, Texas, and points in Arkansas last month. She reports a delightful trip.

Miss Johnson, of the Clarksdale Hospital, spent her vacation in Knoxville and Chattanooga, Tennessee.

Miss Willis and Miss Palmer, also of the Clarksdale Hospital, report very pleasant vacations during August. The reporter has put forth a con-

certed effort to find out just where they did spend their vacations but has not been able to find out. I wonder why they won't tell us?

Dr. W. S. Slaughter, Jonestown, had as his guests during the month, his daughter-in-law, Mrs. W. L. Slaughter of Hot Springs, Ark. Dr. Slaughters son, Dr. W. L. Slaughter, is medical director for several C. C. C. camps and his headquarters are at Hot Springs. We hope to be honored with a visit from him soon.

Dr. W. H. Brandon was a business visitor to Memphis several times during the month.

Dr. E. LeRoy Wilkins has installed in his office a Warwick ionization machine for the treatment of allergy. He reports that very beneficial results are obtained from its use.

Dr. T. M. Dye's son, Blanton, and Miss Marguerite Gainey, of Meridian, were married in Meridian on August 25. Dr. T. M. Dye attended the wedding. Mr. and Mrs. Dye will make their home in Clarksdale where Mr. Dye is one of the editors of the Clarksdale Daily News.

Dr. D. H. Raney, of Mattson, has been on the sick list for a week or so but we are glad to report that he is much better and back on the job now.

We are also glad to report that Dr. T. G. Hughes, who was injured in an automobile accident several months ago, is now back in active practice and getting along finely.

Dr. J. A. Slack, Friars Point, attended the Legion Convention in Memphis during the month.

Several of the physicians of Coahoma County are planning to attend the Legion Convention in St. Louis in September.

N. C. Knight, County Editor,  
Clarksdale.

#### COPIAH COUNTY

Dr. C. R. McKee, Hazlehurst, plans a few weeks' vacation to Mexico sometime in the near future.

Dr. J. F. Scorbrough has resumed his practice after an illness of six weeks. The good doctor is looking better each day.

Dr. C. L. Simmons, Hazlehurst, recently visited in the home of his two sons in Greenville. He also attended the monthly staff meeting of the Vicksburg Sanitarium.

Dr. O. G. Eubanks spent several days at Biloxi on an outing. He and several friends report a good catch.

Drs. R. B. Zeller, C. L. Simmons, and J. C. McGuire, Hazlehurst, and F. F. Smith, Crystal Springs, attended the meeting of the Central Medical Society at Jackson.

Dr. J. A. Milne, Jackson, former health officer of Copiah County, was a recent visitor to the local health department.

Dr. A. L. Gray, Brookhaven, director of the Epidemiological Travel Unit of the State Board of Health, has been investigating typhoid carriers in this county.

J. C. McGuire, County Editor,  
Hazelhurst.

#### DESOTO COUNTY

Mrs. D. G. Hughes, nee Ruth Rhodes, and young son of Oxford spent part of the summer at Mont-eagle, Tenn. Ruth is the daughter of Dr. and Mrs. J. A. Rhodes. Dr. Rhodes when not engaged professionally assists Mrs. Rhodes, who is the genial postmistress at Horn Lake.

Drs. Stuart of Olive Branch and Jernberg of Walls attended the Tri-State Fair in Memphis this week.

The Memphis and Shelby County Medical Society had a most interesting and instructive exhibit at the fair.

This fall weather is delightful and we hope the fall collections will be likewise when bills are presented. The slogan, "See your doctor now," should be emphasized.

Lancelot, Jr., our young son, leaves next week for the University of Virginia to pursue his studies.

In the list of elected legislators, we note the names of the following doctors:

To the Senate:

9th District, Adams County, Dr. James C. Rice, Natchez.

16th District, Noxubee County, Dr. C. R. Bush, Macon.

To the House of Representatives:

Amite County: Dr. W. R. Brumfield, Gloster.

Lawrence County: Dr. J. P. Conn, Monticello.

Marion County: Dr. J. G. Prine, Morgantown.

Neshoba County: Dr. J. S. Hickman, Philadelphia.

Prentiss County: Dr. L. L. McDougal, Booneville.

Walthal County: Dr. L. A. Welch, Tylertown.

Warren County: Dr. J. S. Austin, Oak Ridge.

Yazoo County: Dr. A. B. Kelly, Yazoo City.

The last named is a dentist.

We trust that the incoming governor and legislature will be in harmony and labor for the betterment of the whole state.

Dr. A. H. Little, secretary of the North Mississippi Medical Society, has invited the members of the DeSoto County Medical Society to attend the meeting of that Society at Oxford on October 18, 1935, and likewise has invited the DeSoto members to become a part of the North Mississippi Medical Society.

L. L. Minor, County Editor,  
Memphis, Route 4.

#### HARRISON COUNTY

Drs. Eugene A. Trudeau and Braxton B. O'Mara have announced their association in the practice of medicine and surgery. Their offices are in the Gay Building, Biloxi.

#### ISSAQUENA COUNTY

Dr. J. E. Benton, Valley Park, broke out of a Vicksburg hospital and came home regardless the first of September. He had been detained there very much against his will for about three months.

He imagined the cotton on his fine plantations cannot attain full growth and productivity without the sunshine and heat of his presence. But he was agreeably surprised to find when he got home that this year's crop, under the direction of his son, J. B. Jr., surpassed anything he himself had ever raised.

Dr. W. H. Scudder, Mayersville, slipped off from Issaquena's sizzling political pot the first of September and took in the Confederate Reunion in Amarillo, in the famous Pan Handle region of Northern Texas. This is a wonderful country. For three hundred miles before reaching Amarillo situated in the heart of the great Llano Estadado of our old geography or our almost forgotten schoolboy days, the train, pulled by clean, oil burning locomotives on a wonderfully smooth track, sped onward and upward. Amarillo, in a perfectly level country, is 3700 feet above sea level, higher than any of the Allegheny Mountains. The coaches are air conditioned. The windows are battened down. No need to raise them. The air is kept cool, sifted and clean with the proper amount of moisture by a refrigerating system in each coach. In winter they are warmed by a similar process. One would not expect such comfort in the broad expanses of the west.

There is not a native tree in sight for hundreds of miles, but only a few shade trees brought in and planted about each village and ranch house. As water is the chief object, each ranch is dotted with wells and windmills to pump the water.

There are almost no cattle left there now. Starved out by three or four years drought, they were either killed or sent away to keep them from dying by starvation. Our own Mississippi Delta country took care of thousands of them. Horses are even scarcer, and the Mexican mustang is extinct.

The chief point of interest at Amarillo is the wonderful Palo Duro Canyon. This stupendous work of nature began as a little gulley a million years ago. The Red River rises in its head, and has cut its way through its entire length of nearly a hundred miles. The canyon is nearly a mile deep, and even wider across. It would take Zane Grey to describe it further.



While his other two conferees were enjoying the pleasures of hospitals and travel Dr. T. W. Huey, Grace, was staying at home by the stuff. However, he reports that he has not been overworked taking his earnings to the bank for deposit.

It will take this reporter three years to clear enough to pay for his trip west. While Dr. Benton has not said it, I am sure it will take him a hundred years to pay his hospital bills.

W. H. Scudder, County Editor,  
Mayersville.

#### LAMAR COUNTY

Leigh L. Polk, retired naval officer (chief pharmacist's mate), died May 15 following surgery of intestines at Good Samaritan Hospital, Los Angeles, Cal. His remains were shipped to Purvis for interment.

His father, Dr. L. L. Polk, Purvis, was stricken soon after his death with lobar pneumonia of the left lung. He is now recovering and able to resume practice.

Mrs. Polk had a severe attack of influenza at the same time. She has also recovered.

The South Mississippi Medical Society meets at Hotel Marion, Columbus, 3 p. m., September 12. We anticipate a good time.

L. L. Polk, County Editor,  
Purvis.

#### LAUDERDALE COUNTY

Dr. and Mrs. Lamar Arrington announce the birth of a daughter on September 12, who has been named Mary Alma. Dr. Arrington is superintendent of the Matty Hersee Hospital, Meridian.

#### LEFLORE COUNTY

Dr. and Mrs. B. H. Higdon, Sunflower, passed through Greenwood, August 3, on their way home from North Carolina, where they spent two weeks' vacation in the mountains.

Dr. Fred Sandifer, Jr. spent the month of August at his home here, returning to New Orleans, August 31, to resume his service at the Charity Hospital.

Dr. and Mrs. F. P. Ivy and daughter, West Point, were registered at the Hotel Irving, this city, August 5, on a visit to the Delta.

Dr. C. N. Campbell, Sumrall, came back to his old home to vote August 6.

Mrs. Robert McLean, wife of Dr. Robert McLean, Jackson, visited her aunt Mrs. A. N. Burroughs of this city August 7.

Dr. John Gerald Maurice Olmstead, Hartford, Conn., pediatrician, a graduate of McGill University, Montréal, Canada, was married to Miss Helen Pillow of this city August 9. They were married

at the home of her parents, Mr. and Mrs. R. L. Pillow, and left immediately for Hartford, Conn.

Dr. S. G. Houser, house surgeon, Charity Hospital, Vicksburg, was in Greenwood August 13, to see his mother and family before leaving for a South American cruise.

Dr. H. R. Elliott, Courtland, visited Greenwood August 19.

Dr. W. D. Hickerson, Sanatorium, spent the last week of August in Greenwood, at the County Health Unit, conducting a tuberculosis diagnostic clinic, examining 65 patients.

Dr. T. R. Montgomery, Memphis, Tenn., spent the week end of August 27 with his sister, Mrs. I. L. Jones, Greenwood.

Dr. A. L. Gray, assistant epidemiologist of the State Board of Health, visited the County Health Department at this place August 30.

Dr. Eugene M. Murphy, Macon, visited his son, Prof. C. H. Murphy, at Itta Bena, the last few days of August.

W. B. Dickins, County Editor,  
Greenwood.

#### MONROE COUNTY

It is considerably cooler but, with us, the drought holds on. With the exception of a few showers that did not wet the ground we have had no rains since the middle of June. In consequence cotton is cut off by two-thirds and corn is almost a total failure. Only the first planting of corn will make anything and it is very light. No hay at all. Still we do not despair. Perhaps when, if ever, the PWA fund begins to circulate a few jobs (political) may be released. This brings me to mention the announcement, by Dr. Dye, that a contract might be negotiated as soon as Mr. Braun could be persuaded to vamoose. Personally I do not care for any contract except that Uncle Sam should pay standard fees for attention to any and all of his adopted children. No other business is asked to furnish supplies at reduced prices. Why should we be expected to do so? What I want is that employment be furnished for the masses and honest wages paid. Then there will be ample and adequate medical care for everybody and doctors will be paid for services by those whom they serve. I still have faith in the masses but absolutely no faith in those who have control of the economic fabric. They have fraudulently acquired their billions. What care they for the suffering, starving millions. If all ad valorem taxes could be eliminated and a reasonable levy upon every business transaction substituted, our people would become a nation of home-owners and debt-payers. There should be no way to hide wealth from taxation. All interest bearing investments should be compelled to yield taxes. I would



welcome the payment of a reasonable part of every dollar collected for professional service, if real estate and other property for which money had been paid should be exempt. Why penalize a man for putting money into circulation? But when profit on the investment begins to come in, why should he not be forced to divide this profit with his government? This would stop hoarding and open the way for employment for all who want to work. Those who do not want to work should be compelled to do so. There you are—how about it? Let me relate an incident that strengthens my faith in the masses of the common people. Thirteen years ago an employee of the Frisco R. R. lost his job and had to move away from Amory. He left an unpaid doctor's bill, but said that he would pay when and if he ever got able. I let it go at that and forgot the matter. Yesterday I received a request for a statement saying he wanted to pay the bill. During all these years I have not heard of him or his whereabouts. Probably he has secured a PWA job in the state where he now resides.

Monroe County Medical Society met in monthly session last Monday night. We had a good meeting and made arrangements for the coming meeting of the Thirteen Counties Society at Greenwood Springs on Tuesday, the 17th instant. How I wish you could all be with us. John Darrington is to be our honor guest on the program. This is enough to let you know there will be action all along the line. In my next I hope to give a report on the meeting.

I am quite happy to report that all doctors who have been sick are okay or nearly so. No sickness in their families either.

Politics has adjourned, I am happy to say. If I had not said so much already in praise of the integrity of the masses, I should be inclined to say that it looks as if "all men are liars."

I am sure that all professional politicians are liars and the woods have been full of them and the air has been contaminated with their foul breath. God be praised that at least a short respite is in prospect.

Good-bye—good health—good luck, and good collections to and for you all, is my hearty wish for each of you.

G. S. Bryan, County Editor,  
Amory.

#### PONTOTOC COUNTY

Pontotoc County Medical Society met in regular session in Pontotoc, September 3, with twelve members present. We had a very interesting program. Dr. Douglass D. Baugh, Houston Hospital, gave us a very interesting and instructive paper on diseases of the heart. Dr. Robert E. Shands, gave us a very fine paper on burns and how to

treat same. Both papers were discussed freely by members of this Society.

Pontotoc County has lost two of her leading physicians within the past two weeks. Both have died from diseases of the heart. Dr. J. W. Gillispie, Sherman, died August 24, interment at Sherman, August 25, which was largely attended by doctors and nurses from Pontotoc, Lee and Union Counties. Dr. E. G. Abernethy, Algoma, passed away at 5:15 yesterday afternoon, interment to be at the Ware Cemetery this afternoon. We extend sympathy to both families.

We welcome Dr. Robert E. Shands into our county. Dr. Shands has recently completed his internship in a Nashville, Tenn. hospital and is now located at Sherman.

R. P. Donaldson, County Editor,  
Pontotoc.

#### PONTOTOC COUNTY

We are about back to normal following the election, though interest was very intent for several weeks. Several of our doctors participated in the campaign, but are now back at work. Fortunately, no injuries other than minor cuts and abrasions (and those were due to car wrecks) were sustained as a result of the excitement attending the primaries.

Our County Medical Unit met in Dr. Donaldson's office August 13 with good attendance. Our essayist failed to appear and the meeting was given over to general discussion. Dr. T. H. Rayburn had on display a jar of 84 large round worms that were taken from a 2½ year old negro child.

We have had several cases of meningitis reported in the county in recent months.

Dr. J. W. Gillespie, Sherman, who has been in bad health for several months, died August 24 and was buried August 25. Dr. Gillispie was one of the county's most esteemed physicians and will be missed very much throughout the entire territory. Many of the doctors of Pontotoc and Lee county attended the funeral.

Except for an epidemic of "summer colds", some of which have been rather severe, there has been no unusual amount of illness in the county in recent weeks.

Cotton is opening rather rapidly in this section now, and gins all over the county have commenced work.

T. H. Rayburn.

#### TALLAHATCHIE COUNTY

Drs. J. D. Biles, Sr., Sumner, and J. D. Biles, Jr., Parchman, were visitors to the Charleston Hospital Sunday morning. They accompanied Miss Christine Hood, who was operated upon for appendicitis.

Dr. J. E. Powell, Mrs. Powell and son Charles, spent two days in Arkansas motoring to many towns on their trip.

Miss Jewell Fox, R. N., Clarksdale, visited Miss Oletha Clark, R. N., at the hospital today.

Mrs. Routh Callender, Rolling Fork, is the latest addition to the nursing force at the Charleston Hospital.

Miss Campbell, R. N., Memphis, is specializing Mrs. J. P. McCartney at the Charleston Hospital. Dr. J. A. Harris, Webb, and Dr. Henry, Tippro, were visitors to the hospital a few days ago.

Cotton is moving rapidly. The two gins of Charleston are running day and night. The cotton crop in Tallahatchie County will be from 25 to 40 per cent short.

The corn crop is more than 60 per cent short on account of the dry weather. The doctors are usually the last to know that cotton has been ginned and sold as they have to wait for the top crop which usually fails to mature or the boll weevil gets it.

This county has enjoyed nice showers for the last two days which were greatly needed.

Dr. R. D. Byars, Cascilla, this county, was in town Friday evening.

Dr. J. E. Powell is a great fisherman. He went to the lake the other day and after fishing for sometime he decided to go down (because he could not help himself) and see what was the trouble with the fish. When he came up his glasses were missing. He said the water was fine.

Dr. Lacy Biles, Summer, is on a vacation to New York and other points in the North. He drove through in about 24 hours.

J. W. Moody, County Editor,  
Charleston.

#### WARREN COUNTY

Dr. G. W. Gaines, Tallulah, Louisiana, has again hit the high mark of 100 per cent attendance in the month of August to things medical in Vicksburg, he having attended the staff meeting of each of the private hospitals and the monthly meeting of the I. S. W. Counties Medical Society at which convocation he read a most interesting paper.

The Medical Society of our three counties appreciated the visit and paper read by Dr. Archer of Greenville at our August meeting.

"Politics make strange bedfellows," so we have heard, but the suppressed or impelling force that took Dr. Leon S. Lippincott and Dr. Edley H. Jones to Natchez this month may have been altogether Rotary and "Service above Self," who knows?

It is with a keen sense of appreciation that we are permitted at this early date (August) to review the scientific program already arranged for the annual (December) meeting of the Issaquena-

Sharkey-Warren Counties Medical Society. We note three prominent out of state invited guest speakers have already accepted. Our personal interest is further enhanced when we note one of these was a former teacher of ours, and another with the late lamented Dr. Goldberger, gave personal services to us in the investigation and administrative measures in a widespread pellagra incidence some years ago in another state. Many fluent, forceful, versatile, and convincing county editors write of superb, surpassing, and nonpareil attainments and professional virtues of their respective County and District Medical Societies in all of which we glory. However, we recall that Longfellow said: "We judge ourselves by what we feel capable of doing, while others judge us by what we have done." Therefore, we urge you to ask any impartial Mississippi doctor or out of the state doctor who has ever attended any annual meeting of the Issaquena-Sharkey-Warren Counties Medical Society what he thinks of this annual convocation and we feel certain we could accept his judgment without need of protest. Perhaps better still, "Come and see."

Today, August 15, 1935, Will Rogers died. His tragic passing was not anticipated, but came unheralded like some tornado loosed out of the brooding hills. His life was suddenly stilled and as quickly and effectually as the horologist who, with suddenly interjected finger, arrests the beating of the clock. We are not gifted with befitting descriptive words nor do we possess the faculty of adequate expression to pay a worthy tribute to his admirable character, but may we not be permitted to place one flower, the forget-me-not, in the wreath of enduring memory that an appreciative world will place and forever entwine about his inimitable and exemplary life. It may be correctly considered out of keeping with the duties and purposes of a county editor, or of men and things closely and intimately allied or combative to the medical profession's interests. But may we not with sufficient justification claim that Will Rogers belonged to all professions? His stellar performance in the motion picture "Doctor Bull" was a wonderful delineation and presentation of the many occult virtues of the "old time country doctor," but whether as a portrayed actor upon the screen or as a man in his daily walk with man, he was a helper and healer. His wit and wisdom brought new perspectives and exhilarating laughter to multiplied thousands. A troubled groping mind oftentimes found a surcease from worry in his compelling humor and convincing philosophy. It has been said, "They serve God well, who serve his creatures." Surely Will Rogers has heard, "Well done, thy good and faithful servant." Although biographers will respectively call or portray him as cowboy, rancher, showman, preacher, comedian, philoso-

pher, writer, actor, humorist, radio entertainer, motion picture star, aeronautical traveler and adventurer, national ambassador of good will, etc., however, many of the medical profession have seen in him a marvelous suggestive therapist, a helper to those who bore the burdens of life with distress, a restorer of mirth and gladness to those who were disconsolate, a dispenser of the "Spice of life," to those who lived in vigor, the joyous, healthy, happy life. Will Rogers is dead. His life to many, many thousands was a joyous benediction, his death a tragic sorrow.

"When the mind is in a state of uncertainty, the smallest impulse directs it to either side."

However, it was not a mental state of indecision, but a fixed and determined desire that possessed Dr. Lawrence J. Clark when he, with the commander-in-chief of his small army, left the "cares that infest the day" and drove away for a few days' vacation on the Florida Coast.

Speaking of vacations, ye editor spent five happy days this month in "some sequestered spot," removed from the duties and responsibilities of his daily life, and he, too, can aver "So vain is the belief that the sequestered path has fewest flowers."

The many friends of Dr. Guy Sanderson regret to learn of his illness, and their best wishes attend him while he takes a needed rest for the restoration of his health.

Dr. H. T. Ims, County Editor,  
Vicksburg.

#### WASHINGTON COUNTY

Dr. and Mrs. J. B. Hirsch, son Joe, and Hugh Allen Alexander, Greenville, enjoyed a trip to Memphis recently.

Mrs. J. B. Franklin and young daughter, Sharon, of Jackson visited her parents Dr. and Mrs. T. B. Lewis, Greenville, during the first week in August.

Miss Ann Beck has returned to her home in Nashville after visiting Dr. and Mrs. Otis Beck, Greenville.

Dr. and Mrs. Virgil Payne and two children, Pine Bluff, Ark., spent a few days with his mother, Mrs. A. G. Payne, Greenville.

Mrs. Lurlyne Birchett, Clarksdale, has been visiting her sister, Mrs. Otis Beck, Greenville. They left recently to visit their mother who lives in Jackson.

Mr. and Mrs. J. B. Franklin, Jackson, motored to Memphis to attend the wedding of his brother, Mr. Octave Franklin, to Miss Louis English. Little Sharon Franklin has been staying with her grandparents, Dr. and Mrs. T. B. Lewis, Greenville, during their absence.

Kenny Witte, son of Dr. and Mrs. K. L. Witte,

Leland, has been enjoying a stay in Hot Springs, Ark.

Dr. and Mrs. Paul Gamble and children, Greenville, are enjoying an extensive motor trip, visiting Nashville, Tenn., Boston, Mass., New York and other points of interest in the East.

Dr. and Mrs. L. C. Davis and children, Greenville, have just recently enjoyed a visit with Dr. Davis' father and mother in Meridian.

The many friends of Dr. A. J. Ware, Glen Allen and Greenville, will regret to learn of his serious illness at the King's Daughters' Hospital, Greenville.

The many friends of Dr. R. E. Wilson, Greenville, are delighted to know that his mother, Mrs. W. B. Wilson, Guntown, is rapidly convalescing after an illness in the Kings Daughters' Hospital, Greenville.

Dr. and Mrs. J. C. Pegues and family, Greenville, attended the fair in Memphis recently.

Dr. and Mrs. T. B. Lewis, Greenville, have recently enjoyed a visit with their daughter, Mrs. Rhea Blake, in Bluefield, W. Va.

Dr. D. C. Montgomery and son Cameron, Jr., Greenville, were among those who attended the fair in Memphis.

Dr. J. C. Green, who has recently completed an internship at Cleveland City Hospital, Cleveland, Ohio, is now a member of the Gamble Bros. & Montgomery Clinic, Greenville.

Tom Beals, son of Dr. and Mrs. J. A. Beals, Greenville, is attending the Georgia Military Academy at College Park, Ga., this year.

John G. Archer, County Editor,  
Greenville.

#### WINSTON COUNTY

Dr. W. W. Hickman, formerly of Noxapater, who has been doing a large saw mill practice in South Mississippi, has resigned his place and returned to his farm near Noxapater. The doctor states that the work was exceedingly heavy and that he had to quit on that account.

We congratulate Dr. J. S. Hickman, Philadelphia, on his election to the State Senate in that district. Dr. Hickman was formerly of Noxapater, and was an appreciated colleague in the profession.

Dr. W. A. Young, Boon, has been on a vacation, spending several days in South Mississippi with his father and other relatives.

Dr. T. C. Suttle of Beth Eden locality, and Dr. C. A. Kirk of Fearn Springs locality were on the streets in the city this week.

The doctors are wide awake now looking after collections, as cotton has begun coming in to the market.

M. L. Montgomery, County Editor,  
Louisville.



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DR. JULIUS CRISLER

Dr. Julius Crisler, Jackson, died at Jackson, September 13, of intestinal hemorrhages with heart and lung complications. He had been failing in health for several years. Dr. Crisler was born in 1876, was a graduate of Jefferson Medical College of Philadelphia in 1898, and had devoted his time to surgery. He was a fellow of the American College of Surgeons.

Dr. Crisler is survived by two brothers, Dr. J. A. Crisler of Memphis and Dr. Benjamin Crisler of Itta Bnea, and a number of nephews and nieces, the family connections being widespread.

Funeral services were held from St. Andrews' Episcopal Church, Jackson, and interment was in the Crisler family cemetery at Flora.

Dr. Crisler was highly regarded because of his unselfish service and will be greatly missed.

Geo. E. Adkins.

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DEATHS OF MISSISSIPPI PHYSICIANS

Dr. J. P. Sherrod, Port Gibson, August.

Dr. J. W. Gillespie, Sherman, August.

Dr. E. G. Abernethy, Algoma, September.

Dr. Julius Crisler, Jackson, September.

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TUBERCULOSIS ABSTRACTS

Tuberculin test surveys of school children conducted in numerous communities have directed attention to the problem of discovering tuberculosis among teachers who may be spreading infection to the children. An increasing number of school boards are demanding proof from the teacher that she is tuberculosis free. Since this practice promises to become more widespread the physician should know about the procedures that are being tried and be prepared to participate with the school boards in formulating the best plan. The method employed in Minneapolis is described in a recent article by Harrington, Myers and Levine in the *Journal of the American Medical Association*, brief abstracts of which are here submitted.

## TUBERCULOSIS AMONG SCHOOL EMPLOYEES

Some states have laws providing for the physical examination of teachers and the exclusion of those applicants who have tuberculosis. The Attorney General of Minnesota has ruled that "the skin test for teachers is reasonable exercise of the police powers of the school boards if required for the purpose of safeguarding the pupils of public schools."

Previously the author demonstrated that children taught by teachers with open tuberculosis showed a much higher incidence of positive tuberculin reactions than those taught by other teachers. Ickert found that 93.5 per cent of the children taught by tuberculous teachers reacted to

tuberculin as compared with about 25 per cent reactors in a control group. Frost reported 71 per cent reactions among pupils of a tuberculous teacher whereas only 11.4 per cent of children in adjacent districts taught by non-tuberculous teachers were positive to the test.

Preparing the way—The first step taken in Minneapolis to bring about a survey of school teachers and employees was to arouse the school board to the need of requiring a health certificate of all teachers. At that time, October, 1921, the value of the tuberculin test and the X-ray was not thoroughly appreciated and therefore certificates in some instances seemed almost worthless. More publicity and education was patiently carried on to prevail upon the board to demand from the teacher more specific evidence of freedom from tuberculosis.

The problem was discussed with the medical society which after careful deliberation, supported the Director of Hygiene of the Minneapolis School Board in his recommendation to the board that all teachers and employees who came in contact with school children submit to a Mantoux skin test, the expense of the test to be borne by the board.

Since there was some objection to the tuberculin test based on misunderstanding, the order adopted by the board was modified a few months later to permit the teacher to submit an X-ray film of the chest in lieu of the skin test. Protests of obstructionists continued and therefore it was considered wise to postpone the execution of the order to December 31, 1933. New objections arose but the authorities proceeded with the administration of tuberculin tests and the preparation of X-ray films of the positive reactors. False and absurd rumors which tended to disparage the procedure circulated freely, but tactful execution of the procedure overcame most of the objection and in a short time a high percentage of teachers submitted to the test.

Procedure—A physician and a nurse visited each school building and applied the test to all employees who wished it. Arrangements had been made with the local radiologic society for the taking of X-ray films of the chests of all teachers and others concerned who were authorized by the school board to have such films made. Teachers who declined the skin test, as well as those whose tuberculin tests proved positive, were issued authorization slips for the making of the X-ray films. The films when made were forwarded to the hygiene department of corroboration.

An option on this procedure was offered, permitting teachers to have the tuberculin test applied by their private physicians, a report of the results, certified over the physician's signature, to be sent to the director of hygiene. Further, the school personnel was permitted to submit X-ray



films of the chest taken by physicians of their own choice. These options were exercised at the expense of the teacher. All other costs were borne by the school board.

**Results**—Altogether 2,190 persons were tested with tuberculin and 1,384 elected an option. A single dose of 0.1 mg. of tuberculin was used. Retesting of negative reactors could not be done because it was necessary to simplify the procedure.

Of those tested 49 per cent reacted. The incidence of reactors varied curiously in different schools. In two schools in which there were less than five teachers, all were negative. The lowest number of reactors in the large schools was 10 per cent and the highest was 82 per cent. As a group, school nurses showed the highest incidence, 91 per cent. Of the 2,466 who were X-rayed 59 per cent showed no evidence of disease.

All films were interpreted by one of the authors who classified them as follows:

No evidence of disease .....	1,453
Scoliosis .....	2
Possible substernal thyroid .....	2
Change in cardiac outline .....	44
Evidence of increased bronchovascular markings .....	175
Evidence of fibrinous pleurisy .....	66
Evidence of first infection type and pleurisy .....	29
Questionable evidence of first infection types of tuberculosis .....	85
Evidence of first infection type of tuberculosis .....	532
Evidence of parenchymal lesions .....	78

The method employed is regarded by the authors merely as a means of screening out cases who should have a thorough examination for tuberculosis. The 78 persons with parenchymal lesions as well as those with changes in cardiac outline or other significant findings were all advised to consult the physician for further examination and final diagnosis. To keep a check on those with parenchymal lesions periodic roentgenographic examinations were requested at stated intervals, the films to be submitted to the Director of Hygiene of the school board. There was no interference with practitioners of medicine. The school board should not treat disease but is definitely obligated to make sure that their employees do not disseminate tubercule bacilli in line of duty. Great care must be exercised by the board not to be too drastic in dealing with those who have parenchymal shadows. Every finding should be kept strictly confidential; even the tuberculin test should be applied on a part of the body where it is not visible to other teachers or pupils and the report on the test should be made only to the individual tested.

The costs of the survey are important to con-

sider. All but 102 of the tuberculin tests were paid for by the school board. Of the 2,746 X-ray films 238 were not paid for by the school board. The total expense to the school board was \$5,525.50.

**Advantages of survey**—In the summary of the article the chief advantages of the survey are stated as follows:

"First, disease may be detected before it has produced significant symptoms and when it can be treated successfully in a short time, thus saving the teacher a long period of inactivity from work. Such cases, by adequate treatment, may be prevented from breaking down so as to be a menace to the children and other teachers. Thus, the environment so far as tuberculosis is concerned becomes much safer from the standpoint both of the teacher and the child. Second, compulsory examination often lead to investigation on the part of the teacher so that she becomes informed concerning the contagious nature of tuberculosis. Many such teachers become enthusiastic workers in the tuberculosis control program. This should lead ultimately to the enlistment and the support of great education associations, which will be a valuable acquisition to the forces against tuberculosis.

#### THE WOMAN'S AUXILIARY TO THE MISSISSIPPI STATE MEDICAL ASSOCIATION

President—Mrs. Leon S. Lippincott, Vicksburg.

President-Elect—Mrs. Adna G. Wilde, Jackson.

Secretary—Mrs. H. C. Ricks, Jackson.

Treasurer—Mrs. J. W. D. Dicks, Natchez.

Press and Publicity Chairman—Mrs. Hough H. Johnston, Vicksburg.



Mrs. Leon S. Lippincott  
Vicksburg, Mississippi

President of Woman's Auxiliary to the Mississippi State Medical Association, 1935-1936.

Grace Emma Holcomb was born at Streator, Illinois, the daughter of James W. and Frances Hughes Holcomb, and lived there and later in Branson, Michigan, until coming to Vicksburg in

1918. She was married to Dr. Leon S. Lippincott of Vicksburg in 1923 and they have one son, Leon Stanley, Jr., born in 1929.

Mrs. Lippincott was a charter member of the Woman's Auxiliary to the Mississippi State Medical Association and has been a member of the Woman's Auxiliary to the Issaquena-Sharkey-Warren Counties Medical Association since its organization.

#### FROM OUR PRESIDENT

Greetings to the members of the Women's Auxiliary to the Mississippi State Medical Association. It is my sincere wish that each and every one of you may fulfill your highest ambitions in auxiliary work this year.

We have certain state-wide objectives in which we should all cooperate as a unit and there is also a choice of objectives to meet the requirements and wishes of local auxiliaries.

Our first thought turns to the expressed wish of the president of the Mississippi State Medical Association and a member of our Advisory Council, Dr. J. R. Hill. "It is my wish that the Auxiliary increase its membership and organize auxiliaries in districts and counties where there are none."

Dr. Harvey F. Garrison, president-elect of the State Medical Association and another member of the Advisory Council, has written a very complimentary letter in regard to our objectives and also has assured us of his cooperation.

Dr. T. M. Dye offers his approval and hearty assistance which he has already proven by his generosity in publishing our Transactions with the Transactions of the State Medical Association. We are most appreciative, Dr. Dye.

Our very worthy counselor, Dr. F. M. Acree, has expressed a desire which we should make every effort to carry out. "I should like to see the magazine Hygeia in the library of every high school and college in the state." Also, "The Preventorium Day" in the public schools of the state would bring before the public through the school children the work of this institution, which I should think would be a most worthy activity. Dr. Acree's comments on these auxiliary objectives are most encouraging.

Since mention is made of the above four members of the Advisory Council, it would not be kind perhaps to leave out the fifth member, even though he happens to be "in the family." Dr. Lippincott's advice, aid and encouragement has been and will continue to be valuable to the Auxiliary.

With such approval and encouragement of the Advisory Council behind our program, we should have the ambition and desire to make a step forward in a big way this year.

In regard to membership, there is an opportunity, surely, to increase it. We have only such a very small percentage of members from those who are eligible. The membership of the Mississippi State Medical Association at the time of the Biloxi meeting was 904. The membership of the Woman's Auxiliary was 187. Please give some serious thought to the following figures:

District,	Councilor	Auxiliary Members	Medical Assn. Members
First,	Mrs. J. A. Beals	31	158
Second,		0	74
Third,	Mrs. W. H. Anderson	5	148
Fourth,		7	45
Fifth,	Mrs. John Howell	77	164
Sixth,	Mrs. Lowry Rush	1	74
Seventh,	Mrs. L. L. Polk	16	86
Eighth,	Mrs. H. R. Fairfax	25	92
Ninth,		25	63
Totals		187	904

Allowing for the fact that some of our doctors have not seen fit to take unto themselves wives or have been unable to find women who saw fit to become wives, our Auxiliary membership in Mississippi should be at least 500.

Let's make it 500 before next May.

Mrs. Leon S. Lippincott, President.

#### WOMAN'S AUXILIARY TO THE SOUTHERN MEDICAL ASSOCIATION

The Woman's Auxiliary to the Southern Medical Association will meet in St. Louis, Missouri, November 20 and 21. All women attending the Southern Medical Association meeting are invited to the Auxiliary meetings.

Each State Auxiliary is entitled to send its president, two delegates, and two alternates to form, with the Executive Board, the voting body.

Members and eligible members of County Auxiliaries in these states, are very cordially invited to attend the luncheon meeting Wednesday, November 20 at 12:30 P. M., and the annual meeting, November 21 at 9:30 A. M. The business sessions are to be conducted on a schedule, allowing time for social arrangements. For the development of the Auxiliary, it is important for members and eligible women to be present, because the foundation of an organization rests on its membership and future leadership comes from it.

So make your plans now to go to this convention.

Mrs. Lee W. Roe,  
Chairman Press and Publicity,  
Southern Medical Auxiliary.

#### VICKSBURG NOTES

Dr. and Mrs. George Street have returned from a vacation on the Gulf Coast.

Dr. and Mrs. Laurance Clark have returned from a vacation spent in Mobile and Pensacola.

Miss Sydney Johnston, daughter of Dr. and Mrs. S. W. Johnston, has gone to college at Brenau.

Mrs. R. A. Street is visiting her family in Fayette.

Members of the Auxiliary are anticipating with pleasure the first meeting since a three months summer recess.

Mrs. Benson Martin, Jr. has gone to New Orleans for a visit.

Mrs. Preston Herring entertained her Tuesday Night Bridge Club.

Mrs. F. M. Smith has returned from a pleasant vacation.

Mrs. John Birchett motored to Jackson for the day.

#### HONOR ROLL

The following have contributed to the Mississippi Section of the Journal this month:

County Editors: Lucien S. Gaudet, J. R. Hill, N. C. Knight, J. C. McGuire, L. L. Minor, Eugene A. Trudeau, W. H. Scudder, L. L. Polk, W. B. Dickens, G. S. Bryan, R. P. Donaldson, J. W. Moody, H. T. Ims, John G. Archer, M. L. Montgomery.—15.

Societies: Adams County, W. K. Stowers; Amite County, D. H. Thornhill; Central, L. W. Long; Coahoma County, N. C. Knight; Clarke-Wayne Counties, T. M. Dye; Issaquena-Sharkey-Warren Counties; Talahatchie County.—7.

Woman's Auxiliary: Mrs. Hugh H. Johnston; Mrs. Leon S. Lippincott; Mrs. Lee W. Roe.—3.

Others: T. M. Dye; Felix J. Underwood; G. Lamar Arrington; T. H. Rayborn; R. A. Street, Jr., George E. Adkins.—6.

Grand Total.—31.

## BOOK REVIEWS

*New and Nonofficial Remedies*, 1935. Containing Descriptions of the Articles Which Stand Accepted by the Council on Pharmacy and Chemistry of the American Medical Association on January 1, 1935. Cloth. Price, \$1.50. pp. 510. Chicago: American Medical Association, 1935.

In this book the Council on Pharmacy and Chemistry lists and describes the medicinal preparations that it has found acceptable for general use by the medical profession. A glance at the list of the Council members and the long list of consultants appearing in the first part of the book gives ample warrant for the authority of the Council's selections.

Not only does the Council "accept" new preparations but from time to time it omits those which have been accepted but which have not with the lapse of time upheld their original promise of therapeutic merit. The list of omissions for 1934 shows that the Council has been mainly concerned in this respect with *B. acidophilus* preparations and with antiseptics. Several preparations of each class have been omitted. The list of admissions does not reveal the presence of any preparation that promises to be epoch making in the sense that insulin was, for instance. However, the following newly accepted preparations are noteworthy; Carbarsone, an arsenical used chiefly in the treatment of amebiasis (the Council published a special report on this drug, supplementing the preliminary report of 1932); Hippuran and Diodrast, two different types of urographic contrast mediums; Ca-

rotene, the precursor of vitamin A; Dilaudid, a substitute for morphine; Neo-Synephrin Hydrochloride, which has a number of advantages as a vaso-constrictor over synephrin tartrate; and Diothane, which represents a type of local anesthetic entirely different chemically from any heretofore accepted for N. N. R.

The description of products containing vitamins A and/or D have been revised to give the potencies in terms of the recently adopted pharmacopeial units, thus bringing some measure of uniformity into this heretofore chaotic field. No doubt the book will be revised next year to conform with the new Pharmacopeia in its entirety.

A valuable feature of the book is the grouping of preparations in classes. Each of these is introduced by a general discussion of the group. Thus the silver preparations, the iodine preparations, the arsenic preparations, the animal organ preparations and the biologic products are each preceded by a general discussion of the particular group. These general articles compare the value of the products included in the group with similar pharmacopeial and other established drugs which it is proposed that these proprietary preparations shall supplement or supplant.

Physicians who wish to know why a given proprietary is not described in *New and Nonofficial Remedies* will find the "Bibliographical Index to Proprietary and Unofficial Articles not Included in N. N. R." of much value. In this section (in the back of the book) are given references to pub-



lished articles dealing with preparations that have not been accepted. These include references to the Reports of the Council, to Reports of the A. M. A. Chemical Laboratory and to articles that have appeared in *THE JOURNAL*.

*Annual Reprints of the Reports of the Council on Pharmacy and Chemistry of the American Medical Association for 1934, with the Comments That Have Appeared in The Journal.* Cloth. Price, \$1. pp. 135. Chicago: American Medical Association, 1934.

Each succeeding volume of reports of the Council reveals more of the long and successful fight in the interest of rational therapeutics. The Council is no longer chiefly concerned with noisome proprietaries and yet this latest volume contains reports on such articles as "Vita-Cell," a secret preparation marketed with exaggerated claims, and "Raylos," a shotgun preparation marketed in a way to promote its ill advised use by the public. Most of the "unacceptable" reports in this volume are concerned with products that may have some merit but are not offered to the public in a way which experience has taught the Council is necessary before a therapeutic agent is acceptable. Such products as Iodine Dusting Powder (Sulzberger), rejected for lack of clinical evidence of its advantage over one of its constituents; Pernoston, rejected because of lack of clinical evidence to justify routine intravenous injection of barbital compounds; Di-Hydranol, a claimed bactericidal agent proposed for use as an "intestinal antiseptic," a claim not supported by sufficient clinical evidence; and Squibb Adex Tablets, a product containing a concentrate of vitamins A and D, for which the firm could not agree to adopt a more informative name.

To those who have followed the Council's investigation of *B. acidophilus* therapy, the report "Acidophilus Bacillus Liquid-Mulford and Mulford Acidophilus Bacillus Block Omitted from N. N. R." will be of interest. The Council has apparently not yet reached an ultimate conclusion concerning acidophilus therapy, but it has for years held that no product could be expected to be of value unless it could show at least one hundred million viable *E. acidophilus* organisms at the "date of expiration." Competent bacteriologic examination showed that the two preparations here reported were inferior to this standard. Further grounds for omission were the failure of the manufacturer to comply with certain stipulations in regard to labels and advertising. Another noteworthy omission is that of Alpha-Naphco and its dosage forms, omitted because the Council on reconsideration found that it is a weak antiseptic.

The Council also issues preliminary reports, which define the status of new preparations for which the evidence is not yet sufficient to justify

their presentation to the medical profession generally. Preliminary reports do not imply rejection but rather postponement of consideration until more evidence is reported by competent investigators. These reports are the outposts of therapeutic progress and as such are valuable sources of information to physicians. In this volume there are preliminary reports on Adrenal Cortex Extract, concerned mostly with scientific terminology, Cysteine Hydrochloride, Dihydroxy-Anthranol (Anthralin), Gastric Mucin, Hemoprotein (Brooks), Phenylmercuric Nitrate and Phenylmercuric Chloride.

Illustrative of the Council's efforts to keep those concerned informed of the basis for its actions are the "Recent Revisions or Elaborations of the Council's Rules of Interest to Manufacturers and the Medical Profession," which have appeared in the last two volumes. These inform the profession of the various problems which arise and the care given to their consideration. To be commended also is the "Report on Sterility of Ampule Preparations."

*American Illustrated Medical Dictionary*: 17th edition, revised and enlarged. Philadelphia, W. B. Saunders Co. 1935. pp. 1573. Price \$7.50.

The seventeenth edition of this practical and most usable dictionary contains several thousand of the newest medical terms. It is interesting to note that the first edition of this standard work (1900) was composed of 770 pages, as compared with the 1573 pages of the present volume. The contents have been carefully edited by the Staff of the American Medical Association under the direction of Dr. Morris Fishbein.

This volume is the reviewer's first choice as a usable and dependable medical dictionary for office use.

MARY LOUISE MARSHALL

*A Synopsis of Regional Anatomy*: By T. B. Johnston, M. B., Ch. E. Third edition. Philadelphia, Lea & Febiger. 1935. pp. xxiii + 460, no figs.

The design of this volume is amply indicated in its title. It makes no pretension to being more than a synopsis, prepared "to assist the average student in his work of revision only"; in other words, it aims to aid in review by the student who has already gained detailed information from the cadaver and standard text book. The arrangement, again as indicated in the title, is by regions, excepting that osteology is treated in a separate section: arm; leg; thorax; abdomen; head and neck; central nervous system and organs of special sense. Subdivision under each section is likewise regional, as exemplified by the following subheadings under the upper limb: pectoral region and axilla; scapular region; upper arm; front of forearm; palmar aspect of wrist and hand;



back of forearm and hand; joints. The text matter is succinct. A glossary is provided, listing the original B. N. A. terms and their equivalents in the British revision, the latter being given precedence in the text though with the original terms accompanying, in brackets.

HAROLD CUMMINS, Ph. D.

*Diseases of the Thyroid Gland:* By Arthur E. Hertzler. 3rd edition. St. Louis. C. V. Mosby Co., 1935. pp. 348. Price \$7.50.

The third edition of a monograph by Dr. Hertzler on the thyroid gland, like the two preceding editions, deserves the attention of surgeons and internists interested in this phase of their art. The commanding characteristic of Dr. Hertzler's writings is rugged individualism of thought and expression not commonly found in medical literature. Far from being a medical "pulp" writer, his words and sentences clothe observations and record experiences that have already made him one of the master surgeons of America. This volume is particularly interesting in that the author gives his views and expresses his opinion about some points constantly under discussion by eminent goiter surgeons; e.g., the amount of gland to remove, the relationship of different types of goiter one to another, and the part various possible factors play in the etiology of goiter, as well as observations of his own on phases not so commonly discussed. Years of observation of patients from childhood to well advanced maturity, from the stages of incipient goiter to the bosselated and then the toxic gland, formulate Hertzler's conclusion that goiter is one continuous disease process. He has never seen a case in which a sudden nervous shock could be accepted as the etiologic factor. He prefers to be radical in his attack on a goiter, does not fear myxedema, and states one of his wisest friends says he does not know myxedema when he sees it. He contends that Roher's article on cachexia strumipriva has been a deterrent to surgeons doing the radical extirpation he considers necessary for the cure of goiter.

Activity of interstitial cells, according to him, produces a toxicity of a definite clinical type. The degree of firmness and the degree of fixation of a gland are indications of toxicity and the latter in addition is an aid helpful in determining the optimum time for operation. The responsible factor in goiter is intrinsic, not extrinsic.

Irrespective of whether one listens with credulity, these and other observations or dissenting opinions make the book fascinating, instructive, interesting.

HOWARD R. MAHORNER, M. D.

*Martini's Principles and Practice of Physical Diagnosis:* Edited by Robert F. Loeb, M. D., Associate Professor of Medicine, College of Physicians and Surgeons, Columbia University, and Presbyterian Hospital, New York City. Philadelphia. J. B. Lippincott Company. pp. 213. Price \$2.00.

This is a splendid book on the Principles and Practice of Physical Diagnosis, and is especially to be recommended to the medical student or the practitioner, as the necessary knowledge is condensed into a small volume, well indexed and distinctly 'readable. Of particular value are the synopses of the diseases of the respiratory tract and of the cardio-vascular system, especially so because of the inclusion, with the physical signs of each disease, of the x-ray and fluoroscopic findings as well. Dr. Loeb is to be congratulated on the editing of the translation, and, of course, no comment is necessary on the original work. The publishing is up to the usual high standing set by J. B. Lippincott.

CHAILLE JAMISON, M. D.

#### PUBLICATIONS RECEIVED

Paul B. Hoeber, Inc., New York: *Disease of the Liver*, by Samuel Weiss, M. D., F. A. C. P.

W. B. Saunders Company, Philadelphia: *Clinical Diagnosis by Laboratory Methods*, by J. C. Todd, Ph. E., M. D., and A. H. Sanford, A. M., M. D.

William Wood & Company, Baltimore: *Tumors of the Urinary Bladder*, by Edwin Beer, M. D.

J. B. Lippincott Company, Philadelphia: *Human Pathology*, by Howard T. Karsner, M. D.

The MacMillan Company, New York: *Textbook of Attendant Nursing*, by Katharine Shepard, R. N. and C. H. Lawrence, M. D., F. A. C. P. *Public Health Administration in the United States*, by Wilson G. Smillie, A. B., M. D. Dr. P. H. P. Blakiston's Son & Company, Inc., Philadelphia: *Clinical Atlas of Blood Diseases*, by A. Piney, M. D., M. R. C. P. and Stanley Wyard, M. D., M. R. C. P.

Lea & Febiger, Philadelphia: *Fractures and Dislocations*, by K. Speed, S. E., M. D., F. A. C. S. *Clinical Parasitology and Tropical Medicine*, by D. deRivas, B. Sc. Biol., M. S., M. D., Ph. D. *Food and Beverage Analyses*, by M. A. Bridges, B. S., M. D., F. A. C. P. *Laboratory Methods of the United States Army*, by James S. Simmons, B. S. M. D., Ph. D.

Simon and Schuster, New York: *A Marriage Manual*, by H. M. Stone, M. D., and A. Stone, M. D.

League of Nations Quarterly Bulletin of the Health Organization, Vol. IV, No. 2, June 1935.

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## THE UNIVERSAL CHALLENGE EWING FOX HOWARD ORATION\*

G. S. BRYAN, M. D.  
AMORY, MISS.

There was never a time when I felt more humble than at this moment. I have never undertaken a task when I was more conscious of my limitations. No one recognized and appreciated the splendid traits of character that distinguished him whose memory we seek to perpetuate, more than do I. And if I thought it wise and proper, I could spend all the time that has been allotted to me on this program pronouncing encomiums that would be both true and deserved. But they would be entirely futile; for no one who hears me speak this evening but knows E. F. Howard's life and work were an honor to the profession that he so richly adorned. But I do feel impelled to say, and will say, a few things out of the fullness of my own heart. It has been said that an honest man is the noblest work of God. If this be true, then indeed, Dr. Howard was a "nobleman"; for he was honest to the last degree. He was honest in his dealings with his fellow men, honest in his speech and honest in thought. He was true and loyal to his ideals, his inner and true self. It has been, truly, said that one who is true to himself can not, possibly, be false to any one. He had a most brilliant mind and was endowed with keen perception and quick understanding. His courage was dauntless, he might well have been spoken of as a modern "Richard the lion hearted". I knew and watched and loved

him for thirty years. During these three decades, I was happy to be considered a fellow worker with him for the betterment of organized medicine. We did not, always, agree but we never quarreled; for I respected him and trust that I held and deserved his esteem and confidence. And now, dear friend, please to reach forth your spirit hands and receive a bouquet of sweet scented flowers from the hand of one who loved you in life, who mourned you in death, and one who will always revere your memory.

Now, my friends, the subject to which I invite your attention and thought tonight, I have designated "the universal challenge". In my thinking this is the most important subject that challenges medical thought today. It is important, first, because of its antiquity. It is perhaps, as old as the race. It has always been important because of its high mortality rate. Its importance has increased with the passing of time because its incidence has increased at an amazing rate while its mortality rate has decreased but little if any. I think it should be of supreme importance to the medical profession because of our boasted progress in all phases of medical science and thought; yet it seems to me that we have advanced, all too little, our knowledge and understanding of this great subject.

I am quite sure that each one of you, my hearers, must understand that I am referring to "cancer," or I might more properly say "the cancers," for I want you to include in your thinking every type of malignancy.

If there be need for excuse or apology for the selection of this subject, I will plead an intense personal interest in it. I have always been interested in it. My earliest environment

\*Presented at the Sixty-Eighth Annual Session of the Mississippi State Medical Association, Biloxi, May 14, 1935.

was such that it could not have been otherwise. No sooner had my infant hands tired of grasping for the dust particles that were so beautifully tinted by the sun's rays as they floated in the air above me, than my curiosity and interest was drawn to a disfiguring patch or protecting shield that I discovered on the brow of a paternal uncle in whose home I spent the years of my early childhood. I saw this cancer, for such it was, widen and deepen as months passed by. I saw strength and vitality ebb, I saw the sparkle of a kindly eye grow dull as blindness came on. The memory of what I saw haunts me yet. And finally at the age of seven, I stood by a bedside and saw, for the first time, death write "finis" to a tragedy that has influenced me through all the years that have, since, come and gone. Again in my early manhood, soon after I had begun the practice of medicine, I saw a maternal aunt fade and wither and die from the ravages of cancer. Then, about fifteen years ago, I saw my only brother, the last member of my immediate family, succumb to this "chief of the captains of death". Then do you wonder that I have thought much about this horrible monster—this veritable vampire, that true to form, fans us to sleep while it sucks the life blood from the fairest, the best and the dearest of our race?

And now, before approaching this subject from any scientific angle, permit me to prefer a charge—an indictment if you please—against the medical profession as a whole. That charge is that we have been derelict to duty. And I will say that I believe this dereliction is so grave that it can only be described as criminal; for I believe that had we given this subject the thought and study that it so richly deserves, cancer would, long ago, have been under control as is small pox, typhoid and other diseases that have scourged the world in the past.

And now, let me say that I do not come before you claiming to know anything about cancer that all of you do not know or might not know. I have no new or original ideas to advance nor do I come exploiting any ideas that have been offered by others. I come as one who is desperately in earnest in his search

for light and knowledge. I have read much, oh so much! I have thought, or tried to think, until my brain had lost power to think and concentrate, and yet I have found no light. Cancer still remains the same dark inscrutable mystery it has been through all the ages past.

In this presentation of the subject I do not expect to fathom this mystery, nor do I intend to, even try to do so. Rather is it my purpose to ask some questions that I trust may cause many of you to think and ponder as you have never done before. I shall refrain from quoting statistics, because statistics are frequently misleading and nearly always confusing. And I shall abstain from quoting authorities; for I suspect that within a decade most if not all current teaching will have been retracted or discredited. So if I should quote any opinions it will, most likely, be of some one who is dead. In my study of this subject, scores, yea hundreds, of questions have been presented. But few of these have I been able to answer to my own satisfaction. When I was an undergraduate student, I accepted my teaching with loyalty to my teachers and text books. Very soon I found the job had been poorly done although it was "up to date" and all like that. Soon after graduation great public interest was aroused. The medical press, the lay magazines, the lecture platforms and pulpits united in an effort to make the public cancer-conscious. I said surely the work will soon be done. Surely with all these lights focused on one subject, all ignorance, uncertainty and mystery will vanish. Yet notwithstanding that many thousands of speeches have been made and train loads of printed matter, lay and professional, have been distributed and read, we know little more than formerly. Millions of dollars have been spent in waging a campaign for cancer control. Early diagnosis and early treatment have been stressed, and rightly so, but what are the results? The incidence is greatly increased and the mortality rate is practically unchanged. It seems to me that those of us who have thought on this subject have devoted our time and talent to the devising of some special technique in surgical or radiological approach and attack. This is good and well, and I congratulate

late our friends on their ingenuity and skill. But what have we learned about cancer? More than twenty years ago I asked myself and others what is cancer? The best definition I have found in any dictionary is "any malignant neoplasm". Bah! A long time ago I heard one of the nation's leading pathologists say, "cancer is a bolshevik uprising of normal cells". Good, but why this uprising? May it not be that cancer is some unknown factor that causes normal cells to revolt against biologic laws and congregate in mutinous uproar? Recently I had a personal communication from a pathologist whose reputation as such is nation wide and he stated in this communication that "cancer cells are about the same as other cells in size, shape and structure but they differ from them, somewhat, in chemistry". He further stated that they are "unlike other cells in that they are disobedient to biologic laws—therefore they are anarchistic and antisocial". Again I say good, but I still am not satisfied. Will not some one tell me more?

The overshadowing question in the study of this problem, it appears to me, is its etiology. Once the true nature of cancer and its etiology, have been determined, all the difficulties will disappear. Both prevention and cure will, then, be easy and certain. I am wondering if it is possible that cancer is one of the so-called "deficiency" diseases? May its incidence not be due to the absence, rather than presence of some active principle? Pellagra, beri beri, and other diseases long held as mysterious conditions, are no longer so considered. I am wondering if a closer study and clearer understanding of the part played by the vitamins, amino-acids and endocrine secretions might not help us in meeting the great challenge that we must face. I have corresponded extensively, during recent years with many different men who are regarded as leaders in medical thought and teaching. These men are scattered over a great part of the United States. I have felt highly honored and have been greatly surprised by the fact that not a single one of these busy and scholarly men has neglected or failed to reply to all my letters. In all my letters I have asked many questions. To some of these questions

there seemed to be agreement in reply, but to the question of etiology, there has been great variance of opinion. Many, most of them, answered frankly. "I do not know". One man who is very much in the nation's eye, who is noted as an internist, says he is convinced that "diet" plays the major role in its causation. A great surgeon who is recently dead, to my surprise, said that he was convinced that protein foods were much concerned in the matter of cancer incidence. One surgeon, who has long been a teacher of medicine and surgery in the East, said "I have been convinced, for forty years, that the trouble is due to an infection due to an unknown and unrecognized microscopic organism". And he intimates that he suspects that the different types of cancer may be caused by different types of organisms. Others, while considering this line of reasoning, reject it because there is no evidence of community spread of the disease. Some there are who believe that disturbance of the acid base with a shift of pH to the left may be a factor of much importance in its incidence. These mention the fact that cancer rarely occurs among the undernourished and starving. The dehydration of tissues among such people being considered as a possible protection against it.

Uncivilized races seem to have, at least, a partial immunity to cancer. This fact is cited by those who believe that diet and lack of sufficient food for protracted periods of time, may account for the low incidence of the disease among this class of individuals. While cancer does occur in very early life, why is it that beginning with the fourth decade of life its incidence increases? I am wondering if endocrine dysfunction is not more likely to occur then than in earlier life? Again I wonder if the pH is not more likely to shift to the left after middle life? Prolonged and constant irritation is thought by many to be the chief cause of cancer. Some go so far as to say that some biological force acting as a constitutional irritant plus local irritation accounts for all cancers. I wonder if this is near the truth? Heredity has always held a place in both medical and lay thinking. We all know of the work



that has been done with mice. We know, too, of the transplantation of cancer cells. I am happy that these studies have been carried on, but can we really claim that they have carried us very far toward the solution of this greatest of medical problems? We stumble and stagger in our blindness and ignorance, but my friends, do we not face, at every turn, one great question? Namely: Is cancer a constitutional or local disease or condition? Is it *first* constitutional in nature, followed by local manifestations, or is it primarily, local with resultant constitutional changes? When this question has been answered with conclusive proof, I think we shall have made a long stride in the solution of all other phases of the problem. More than half a century ago Padgett taught that it was, first and essentially constitutional followed by local manifestations. His teaching and writings are still held by some to be entitled to be regarded as classic.

I wonder if it would not be well for us to devote more thought and study along such fundamental lines and less to perfecting and acquiring surgical and radiological technic? I, probably, may have more to say later in this discussion, along this line. Another question, I hold to be of great fundamental importance is: Can cancer be cured? As an undergraduate student of medicine, I was taught this was possible but not probable. At that time diagnostic precision had not been worked out as it has since been. The question of how we might know a cure had been attained arose naturally. We were told that if a patient thought to have cancer got well and remained free from further cancer manifestation for three years we might know that the case had been cured or that we had made a mistake in diagnosis. This was not very comforting to either doctor or patient. Soon I learned that we must wait five years, then we were told that seven years must elapse before we could assure the patient she was free from cancer. But now there are some who say we may *never* know for a certainty. Perhaps it is well that doctors do not work on a "no cure no pay" plan, else we could never ask or expect pay for cancer cures. But most doctors seem to accept a five year period as

long enough to wait for glory (they want their pay sooner and I think they should have it sooner than they usually get it). But another question crowds into the picture and this question is very confusing to me. It is this: Is there such a thing as spontaneous cure for cancer? By this I mean do cancer cases ever get well without treatment? Is "*vis medicatrix naturae*" ever sufficient to bring about a cure? If you answer in the affirmative, and there would seem to be no reason to question that this is true, then I ask you in all seriousness how can a doctor prove that the cures for which he takes credit were not *spontaneous* rather than due to his therapeutic efforts, whatever they may have been?

There are some who think and speak of recurring cancer. I wonder if these do not regard cancer as purely local in character? And I wonder if they do not consider every cancer as cured when it shall have been completely removed, by whatsoever method that may be adopted? I can readily understand that if cancer is due to some infecting organism that expends its virulence locally, that removal of the focal manifestation would be equivalent to a cure and, unless permanent immunity should be established, reinfection might take place. But under this reasoning, it would not be a recurrence, but reinfection. But on the other hand if it should be possible or true that cancer is primarily a constitutional disease, whether due to endocrine dysfunction or some other biochemical upset, it appears to me that it is improper to speak, either, of reinfection, recurrence or metastasis. As an illustration let us consider syphilis,—first a focal infection followed by general systemic infection, followed, possibly, by a period of quiescence. Then after years, maybe, local manifestations. Does anybody think that removal of gummata could possibly cure syphilis? Again let us consider leprosy. Does anybody teach that leprosy can be cured by treating the local manifestations of the condition?

Having confined my remarks, almost entirely, to the nature and etiology of cancer, with a desire not to tire you, it is fitting, now to discuss matters related to its control. Control of

cancer certainly includes prevention and correct and early diagnosis, and in addition to these, prompt and proper treatment. Or, more simply stated, we might say cancer control includes prevention and cure. And I am wondering if most of our efforts along these lines are not based on empiricism? Please do not understand me as wholly condemning empiricism, for we must know that much of our best work depends upon empiricism, or did, for a time, so depend. As an instance I mention the treatment for malaria. But empiricism had to be displaced by scientific knowledge before real progress towards malarial control was made. So I want to say, with emphasis, that I do not believe we can hope to limit or lessen the incidence of cancer until we know about the nature and etiology of the disease. Nor do I think we can hope to do much in the way of curing cancer until we know more about it. Please do not think that I am inclined to minimize or discredit the work that is now being done along accepted lines of treatment. I know of nothing superior or equal to surgery and radiology in treatment of cancer. In fact, I feel that our surgeons and radiologists are to be commended and praised for their work. Their technic is, I think, well nigh perfect. But in spite of all this, are we getting very far in our undertaking to control cancer?

At the April meeting of a group of the C. A. S. members in Cleveland, one of the directors of this important organization boasted that there were twenty-six thousand cures of cancer to the credit of surgery and radiology. This is good—very good, *if true*; but are these people cured? And if cured how may we know that they were not spontaneous cures? Again if only twenty-six thousand cures of malaria or diphtheria were claimed and no proven preventions, would our boasting not be considered vain? Twenty-six thousand out of all the millions of cases treated! What a pitifully poor showing that is! But if there were no reason to question the number and genuineness of these cures, I would be the last to discourage. But even then, I would plead for more knowledge. I would ask to be enlightened as to the how and why. How can it be that two procedures so

entirely different can produce the same beneficial result? Specific diseases, if cured, must, in my thinking, require specific treatment. The only way around this hypothesis, it seems to me, is to assume that the different therapeutic procedures stimulate or bring about certain biochemical processes or reactions. So I am led to wonder if the traumatism resulting from the surgery or the repeated applications of the trauma of irradiation may not be an important factor in these treatments? And just here those who think that a shift of pH has much to do with the prevention, cause and cure of cancer, find a premise for their reasoning. Since it appears to be true that individuals with a pH leaning to the alkaline side are prone to develop cancer and that this alkalinity increases as the case progresses, may this fact not be a guide to the prognosis in each individual case? It seems to be a fact that most stomach cancers secrete little or no hydrochloric acid. I wonder if this is *propter* or *post hoc*? I wonder what conclusions should be drawn from the fact that alkalinity is greater in cases with internal cancer than with skin cancer? If the normal reaction of leukocytes is acid, I wonder if the rush of these cells to the point where surgery or irradiation is done may not have a controlling influence on the mitosis that causes the cancer growth? Again I wonder if the systemic shock that attends major surgery and general anesthesia with the inevitable acidosis that goes with them, may not be responsible for the recessions and apparent cures that we see? If not, on what basis or theory can the cures that follow exploratory operations on cases that are declared to be inoperable after cutting down on them be explained? These cases are occurring all the time everywhere. They are opened up and closed again and the patient told that death is inevitable. But they simply refuse to die, they live on to plague the surgeon on every turn he takes. You say mistaken diagnosis, but I say not. These cases have been seen by our best men, biopsies done by our best pathologists. Correct diagnosis, but wrong prognosis, because we do not understand cancer. Can this be true?

What always happens when deep anesthesia

is produced by chloroform or ether? Do we not expect acidosis to follow? May this shift of pH not be important in the treatment of our cancer cases? If so, would not repeated anesthesia be logical?

#### SUMMARY

What is cancer? Is it, primarily, a local or is it a constitutional disease? Is it infectious in nature, that is, is it produced by means of some microscopic organism that may gain entrance into our bodies in some mysterious way? Is it a deficiency disease, caused by lack of some food element or some vitaminic influence that should come to us from air or sunshine? Is it due to some poison which enters the body from some extraneous source? Is it in any way due to or influenced by hereditary conditions? Is it caused or is its course influenced by endocrine dysfunction? Why is cancer rare in the early decades and more common in later life? Is cancer curable and if so, how may we be sure that it has been cured? Do cancer cases ever get well without any treatment whatsoever? If so, how may we know that all cures are not spontaneous rather than dependent upon our therapeutic efforts? May not all apparent cures be recessions, rather than cures? Are some people born immune to cancer or do some lose their immunity? Finally, is cancer due to the acquisition of some element or principle or is it due to the loss of some element or principle of defense?

In conclusion I will say that if I shall have increased your interest in cancer to the point where each of you will give the subject sober, serious, honest, earnest, thought, I shall be most happy; for I believe if every member of this association would devote thirty minutes per day to thought and study of the subject for one year, the challenge will have been met and cancer control will be an accomplished fact.

My friends, of course, I am pleased to look into your faces this evening, and I feel highly honored in that I have been invited, by my dear friend, your honored president, to appear before you with him on this occasion. I am always happy to meet and mingle with my friends, anywhere. But to meet them in beautiful, historic, intriguing old Biloxi, is great, indeed. The very name, Biloxi, seems filled with dul-

cet, soothing music. And *friends!* What word in any language means so much to one who has known and loved friends who were true and loyal? Friends, Biloxi! I salute you.

Four times have I come to this beautiful coast land to foregather with you, my friends, and on each occasion you have thrust some undeserved honor upon me. Be assured that I appreciate these honors and love you all the more because of them.

Some times I have felt that when evening comes, I should like to slip away from the environs of a busy and toilsome life—come to this alluring coast and sit and dream and slumber, slumber and dream, until that deep sleep that must, some time, come to us all, shall shut out the memories of all the trials and vicissitudes, as well as all the joy and happiness that have come my way. One day, while standing with a materialistic minded friend, gazing out over the waters of this beautiful bay, I said to him, "I am always transformed when I stand by the side of the sea. I can not understand the emotions that fill me at such times. I think that my ancestors, of whom I have no records, must have been sea-going and sea-loving folk. Much joy and much sorrow must have come into their lives because of the sea." To this he replied, "Do you not, rather, think it is because your ancestors, in the dim, prehistoric times many millions of years ago, did not live in a house by the side of the sea but were denizens of the deep?" I did not make reply to his question, but my mind reverted to the love ditty, in which this line, "when I was a tadpole and you were a fish", appears.

#### POPULAR BELIEFS AND SUPERSTITIONS ABOUT EYES\*

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A review of superstitions and popular beliefs shows that many great medical discoveries and some of our modern medical methods have been known in folklore for

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hundreds, and even thousands, of years. Some apparently foolish customs contain a grain of important truth, based on keen observation of cause and effect, which is responsible for their long existence.

Would you prescribe the use of red flannel to prevent pitting in smallpox? Probably not. Yet you would quite possibly use infra-red light, a more efficient application of the same principle of heat light. Often employed in crude and indirect ways, an important basic truth is maintained by many generations in different forms. The form which we use today is, on first thought, entirely new. In reality, it is often but an old idea dressed in new clothes. Some of our popular customs will probably be looked upon by future generations very much as we look upon those of a hundred years ago. The more efficient application of fundamental truth contained in popular belief, which some observer was keen enough to see, intelligent enough to investigate, and persistent enough to re-apply in a better way, has given us many of the world's greatest medical contributions. For example, the discovery of vaccination for smallpox by Jenner was only a more practical application of the then-popular belief that those who milked cows had smallpox less often than others. Some of the greatest medical advances of the future will likewise be based on important fundamentals which have been hidden away in popular customs for ages. Popular medical beliefs have existed as long as history, and will probably so continue. They have sometimes accomplished good, sometimes harm, and usually neither. They often represented the best solution of health problems possible at the time in which they arose.

A great many people look upon these popular medical beliefs, impressed upon them since childhood, as short cuts to health, and are not sure of their incorrectness or harmfulness. It is even believed that we physicians are somewhat prejudiced against ideas which do not originate with us, and which we do not fully understand—that we are un-

willing to see real merit in popular customs because of ethical or other prejudices. The public is becoming more health conscious, and our leadership in health guidance with all that it includes, will not be strengthened by our ridicule of their treatment methods, especially where motives are easily misunderstood.

Quite a few popular beliefs, superstitions, and religious customs originated as hygienic measures, enforced by religious leadership. Looking upon all religions as schools of health and happiness, physical, mental and moral, the preservation of physical health upon which mental and moral health obviously depend, is of paramount importance. The Jewish perscription of pork was probably necessitated by the trichinae and other parasites which infested hogs, and which affected the health of those who ate pork. Though the cause has long ceased to exist, the custom still prevails. Likewise, the Jewish rite of circumcision materially reduced the frequency and severity of affections to which tropical peoples are especially liable. The dietary and other restrictions of the Lenten season better fit the average person for the approaching hot summer. The season of Christmas, which is devoted to the encouragement of good will to mankind, as well as the observance of the Sabbath, which marks a rest period in the week, are fundamental in all religions because they meet basic human needs.

Peculiar coincidences are encountered in studying health superstitions and beliefs, of which the blindness of Tobit, and its cure, as told in the Old Testament, is an interesting example. Tobit, the father of Tobias, while reclining in the courtyard of his home was struck in the eye by the excrement of a bird flying overhead. This resulted in blindness. The diagnosis of today would probably be a corneal ulcer of pneumococcal origin. The recovery of his sight, as quoted from the Book of Tobit, is even more interesting:

Chapter 6, Verse 2: "When Tobias went down to wash himself in the Tigris, a fish



leaped out of the river, and would have devoured him. The Angel of the Lord told him to take out the gall, and to put it up in safety." Verse 6: "Tobias asked the Angel what was the use of the gall." Verse 8: "'As for the gall,' said the Angel, 'it is to anoint a man who has whiten in his eyes, and he shall be healed.'" Chapter II, Verse II: Tobias took hold of his father and stroke of the gall in his eyes, saying, 'Be of good hope, Father.' " Verse 12: "And when his eyes began to smart, he rubbed them." Verse 13: "And the whiten fell away from the corners of his eyes, and when he saw his son, he fell on his neck."

The coincidence lies in the fact that bile salts in solution are among the very few drugs which dissolve cultures of pneumococci, and that they are being used experimentally at the present time in the treatment of pneumococcal ulcers of the cornea.

Popular superstitions and beliefs usually contain both a mental and physical factor. The mental part is intended to increase the individual's confidence in recovery and augment the urge to get well. Confidence reduces the mental shocks of life and helps overcome the fear of pain, disability, death, which play an important part in mental medicine. The state of panicky fear is no more conducive to health, happiness, or the recovery from disease today, than it was five thousand years ago. It is not surprising that the observing leaders of that time who evidently understood this psychological law used the best means at their command to overcome fear.

Health superstitions are based essentially on the concept that good health in one form or another represented the blessing, or goodwill of the Deity. Disease, or ill-health, on the contrary, represented the anger of the Deity because of violation of his dictates. If evil was personified, the machinations of the devil or evil spirits enforced the punishment of disobedience. Our modern conception of the same basic idea is that violation of fundamental hygienic laws as they apply to the

individual will cause sickness in one form or another. In one case, sickness comes from the disobedience of religious dictates, in the other, sickness results from the voluntary disobedience of the laws of hygiene formulated through experience to help human beings invest their health capital most wisely.

The physical phase of health superstition takes advantages of the fact that action of some sort is usually necessary for accomplishment. Mere thought is not sufficient. In some instances, popular beliefs were originally based on actual observation which correctly, or incorrectly, correlated cause and effect. In other cases, the performance of some unusual act was often used in one way or another to increase the individual's confidence in recovery, and to augment the urge to get well. Ceremonies in which many participated were sometimes used. The Chinese prayer wheel, which enables the individual to crystallize his wants, represents the last word for those in whom this mental attitude can thus be aroused. Consciously, or subconsciously, the mind is stimulated effectively to attain its wants.

It is interesting to analyze several popular beliefs and superstitions about eyes. In some of these apparently ridiculous remedies are the same fundamentals which modern medicine now employs in a more effective manner.

#### TO CURE STYES

**Rub Them with a Gold Wedding Ring.** Styes are small abscesses near the roots of the lashes. Pain is caused by pressure on the sensory nerves, the relief of which is partially obtained by reducing the skin tension, usually with heat, massage, or the discharge of the enclosed pus. Rubbing the styte with a gold wedding ring supplies the warmth and massage; the ring has the advantage of being smooth and, probably, as clean as anything available to the sufferer.

**Rub Them with Spittle.** Warmth and massage, especially with a viscid fluid, tend

to reduce the skin tension and favor discharging of its contents. Unfortunately, the cardinal virtue of cleanliness is sadly lacking in this remedy.

Take a Pebble from a Running Stream and, after Rubbing the Sty with It, Replace the Pebble. Here, the massage with a smooth, clean object is used, and even a faint suspicion of surgical cleanliness is suggested in the command to throw the pebble away after using it.

Wear a Nutmeg Around the Neck. The only merit which is apparent here is the stimulation of confidence in recovery. In a similar superstition of wearing asafetida about the neck to prevent sore throat and diphtheria, there was, in addition to the possible mental benefit, the slight counter-irritation of the asafetida which, possibly by design, out-stunk the sore throat.

Go to a Crossroads and Turn Around Three Times. Here, the performance of an unusual act in an unusual way illustrates how the urge to get well was augmented without apparent connection between cause and effect.

Rub a Black Cat's Tail over the Eye Nine Times. The outstanding feature in the performance of this unusual act is the surprise to both the cat and the patient. In the scuffle which might easily ensue, through the misinterpretations of motives, especially by the cat, anything might happen to the sty. The tameness of the cat, also, would seem a very important factor in the outcome of the treatment.

#### CHILDREN OUTGROW CROSSED EYES

Crossed eyes practically always tend to become worse unless straightened by glasses, training or operation. The fundamental causes which forced one eye to cross the first time usually continue to act. The probability of both eyes seeing perfectly and pointing correctly, unless properly treated, becomes more improbable with each succeeding month. The longer one eye or the other squints, the more difficult technically to cure

squint, after the age of six. The principle causes of crossed eyes in children are: the defective pulling power of one of more muscles that move the eyes and keep them straight; defective focusing power of the eyes usually worse in one eye; and defective development of those parts of the brain in which the images of both eyes are blended into a single mental picture.

#### MEASLES AND OTHER CHILDHOOD DISEASES CAUSE CROSSED EYES

Children frequently develop crossed eyes during the ordinary diseases of youth, or very shortly thereafter. Any slight illness will apparently cause one eye to cross if a child has defective pulling power of the ocular muscles, defective focusing, especially of one eye, or the defective brain development mentioned above. These have probably existed separately, or combined, since birth.

In reality, the eyes, which previously tended to cross, needed only a slightly lowered vitality to produce actual crossing. Having done no accurate, or sustained seeing in life, such children have been able to keep their eyes straight, with relatively little increased fatigue. As soon as they begin to use vision more for close seeing or vitality is lowered by any childhood disease, such as measles, they can no longer bear the fatigue of seeing together with both eyes, and pointing correctly at the same time. The better seeing eye is then usually employed for more accurate vision, and the other eye points in the direction where ocular fatigue is least.

#### BORIC SOLUTIONS CURE EYE DISEASES

Boric solutions, as used in the eyes, probably have never killed a germ or cured an infection. At best, their bacteriacidal power is very limited, especially when diluted with the tears. If you doubt this assertion, place a solution of borax or boracic acid in the air a few weeks, and watch it become cloudy from a fungus growth. The popular faith in the curative virtues of boric solutions depends largely on the fact that plain water

in the eye burns, but boric solutions do not. Being isotonic with the tears and non-irritating, they produce a relative sense of comfort as compared with water, a fact upon which was founded for several generations the inference of healing and antiseptic qualities. Aside from the removal of mucus, boric solutions have no place in the cure of eye diseases, except in augmenting the urge for recovery. The same applies to normal salt solution, and other chemicals, which are used to make up the large number of proprietary eye drops and washes.

#### "SORE EYE" REMEDIES

Babies' Sore Eyes Are Prevented And Cured by Lemon Juice. The use of freshly squeezed lemon juice to prevent and cure sore eyes in babyhood is still highly regarded in some sections of the Spanish countries. Although citric acid solutions have no specific healing qualities in eye diseases as granules and old wives believe, their cauterizing action would aid in destroying conjunctival bacteria. Crede's prophylactic method in ophthalmia neonatorum with silver nitrate is simply a more efficient application of the same idea and was probably based on the previous use of cauterizing agents such as lemon juice.

Urine Cures Sore Eyes. No popular treatment in the world's history has probably done more harm than the use of urine in the eye. Thousands owed their blindness to this home remedy which infected them with gonorrhea and other diseases. Most of them were infants. Unfortunately, the originators of this treatment did not understand that some of the many serious eye diseases are transmitted by contact with infective matter, especially urine. Without this knowledge, it is easy to understand why fresh urine was used in the eye. It is warm, and does not burn as water. Only an understanding of personal hygiene can eliminate treatment methods like this which, unfortunately, still exist.

Warm Breast Milk Cures Sore Eyes. No harm, except for the delay in obtaining more

effective eye treatment in gonorrheal infections, probably resulted from the use of fresh breast milk in the eyes. It was warm, non-irritating, oily, and above all, reasonably clean. The use of a secretion, or excretion, of one sort or another, to cure disease was frequent in bygone days, and was probably the fore-runner of endocrine therapy.

#### CHEWING GUM WEAKENS THE EYES

Since time immemorial, human beings have chewed gums of many kinds, for flavor, appetite, and relaxation, if not for beauty. Especially in the novice, prolonged chewing does tire the face muscles, the weakest of which are those of the eyelids. The arduous use of gum may produce a slight sense of fatigue or weakness of the eyelids. It is also said that when manufactured chewing gum first came into vogue, parents fostered this popular belief to discourage its use among children.

#### NIGHT BLINDNESS IS CAUSED BY SLEEPING IN THE MOONLIGHT

Not many years ago, night blindness was thought to just happen. Now, we know that it is due to poor retinal light adaptation and has many causes, ranging from food deficiencies to defective ancestors. Other causes probably remain to be discovered. Sleeping in the moonlight is not yet one of them although the restlessness associated with sleeping in excessive light of any sort could aggravate the amount of night blindness previously existing in a hypersensitive person.

#### GROWING A MUSTACHE CURES WEAK EYES

During adolescence skin eruptions, including styes and other inflammation, are more frequent. The secondary sex characteristics, such as hair on the face, are also developing and the endocrine mechanism is changing. With the development of the beard or mustache, the skin eruptions, especially those involving the lashes, usually diminish, hence the probable association.

#### EYE TEETH CAUSE EYE DISEASES

Long before focal infections were understood the upper second incisor tooth was

called the eye tooth because it was thought to point most directly toward the eyeball.

The first molar is thought by some to be the most frequent offender in focalizing infections that spread to the eye and elsewhere in the body.

#### BEWARE OF THE EVIL EYE

Frequent mention is made in ancient and modern history, especially among emotional people, of death and disease caused by the glance or look of people who exerted, through their eyes, an evil influence on others. In Africa, over a hundred persons were supposed to have been killed within a few years by the spell of such a person. The real story will probably never be known. Those who have much energy and self-control, which help them to look others directly in the eye for an unusually long time, tend to frighten, mystify, or dominate other personalities less gifted. It is possible that the so-called "evil eye" was also applied to those with ocular disfigurements of many kinds.

#### GLASSES WEAKEN THE EYES

Correcting lenses place the focusing power, which optically should be inside, in front of the eyes. If this focusing power is necessary to increase vision, or decrease ocular fatigue and discomfort, proper correcting lenses are the only intelligent remedy. Glasses don't weaken the eyes. Quite the contrary, most persons who wear glasses do not require them permanently. When ocular fatigue is reduced sufficiently by the use of correcting lenses, or the aggravating irritability of the eyes, often associated with dysfunction elsewhere in the body, is lessened, the glasses can often be dispensed with entirely, or worn only during prolonged eye use.

After the age of 40, the automatic attachment of the ocular camera usually progressively weakens and glasses become necessary for close eye use. These, technically, have no connection with the correcting lenses which may be needed for distant sight. Dif-

ferent strength lenses for far and near use frequently become a necessity which is met by two separate pair of glasses, double vision lenses, popularly called bifocals. Increasingly stronger glasses are usually required for close eye use after 40, not because glasses weaken the eyes, but because the weakening focusing attachment in the eye requires a correspondingly stronger lens before the eye for clearest sight.

The popular prejudice against glasses, which is fortunately subsiding, is largely due to the inference of disability which they convey, the physical discomfort of wearing glasses, and the belief that many glasses have been uselessly prescribed. A better understanding of the reasons why glasses have been considered useless by the wearer is especially interesting at this time.

In all fields of human endeavor, there are the incompetent and dishonest. Ours is not an exception. Fortunately, in ophthalmology, they are few, but unfortunately, they cannot quickly be eliminated from our complex social system. Only a better understanding of medical values and medical service can reduce the number of patients who are unfairly taken advantage of, by those who claim competency and honesty in the examination of eyes for glasses.

One or more of the following fundamentals are involved in the large majority of apparently unnecessary, and unsatisfactory glasses. The solution of this problem to the public's satisfaction, is somewhat of a challenge to medical leadership in sight conservation, and all that it includes.

Incompetent testing, poor frame fitting, incorrect adaptation of lenses to individual needs, practical reductions of the varied factors which have caused the patient's eye symptoms, and a more definite understanding between the eye physician and the patient, especially concerning the practical value of the glasses which are being prescribed.

These problems are especially important in prescribing necessary and satisfactory glasses for the large group of border-line patients. The need and benefit of correcting lenses to them often depends not only on accurate test-



ing of the eyes, often possible only after dilating drops, but also on a broad understanding of the individual's eye use, and especially the varied causes which have produced the ocular symptoms. Some patients unfortunately seem to believe that all their ills will be cured by the purchase of a pair of glasses, which can be worn in a coat pocket, a ladies' purse, or in a desk drawer.

#### DILATING DROPS

In the treatment of some eye diseases, like *iritis*, dilating drops are necessary to prevent blindness; in others, like *glaucoma*, their use may do great harm. Those who are not legally permitted to employ dilating drops have publicized their abuse, apparently to mislead the public and to create a false prejudice for personal gain. To determine the actual necessity for wearing correcting glasses, their proper strength, and everything else necessary to the correction of eye symptoms, dilating drops are often essential, sometimes advisable, and, occasionally, harmful. Only an eye physician can intelligently decide on the advisability of their use.

In approximately one of every three persons who have eye symptoms, most efficient lens can be determined only after the use of dilating drops, which temporarily eliminate the variable automatic attachment of the eye. This variable automatic attachment causes the chronic strained effort necessary for the most distinct sight, and must be eliminated with dilating drops to properly test the eyes for glasses. As the clearest sight is obtained by the smallest possible retinal image and the smallest retinal image is often obtained by a chronic, strained, muscular effort, which aggravates the eye fatigue, even the most intelligent patient can not select the necessary one basic lens from even a small number of possibilities, until the variable automatic focusing mechanism can be temporarily eliminated. It prevents the accurate determination of the focusing power which the eye without straining effort needs to see most distinctly. This can be accomplished only with dilating drops.

Unfortunately, medical science has not devised an efficient test that will enable even

the eye physician to determine positively the necessity of dilating drops for efficient glasses in each individual patient. In children, especially those with a tendency to crossed eyes, their use is imperative; in young adult life, their use is usually necessary; and after forty-five, they are usually not needed to obtain proper glasses. To this general statement there are obviously many exceptions.

We know that in one patient of every three it is impossible to prescribe efficient glasses without the use of dilating drops, and we do know when they are harmful. If their intelligent use can do no harm, and only good through making possible the prescribing of more efficient lenses and quicker recovery, there is but one intelligent answer: dilating drops when advisable or necessary.

Without dilating drops, especially in younger patients, it is usually impossible to determine the most efficient lens by a single test, because it is different with each test. A large number of tests are necessary, therefore, to determine even an approximate one best vision lens, which is accompanied by a variable amount of strain, the very thing that interferes with the determination of the most efficient correcting lens or glasses.

With dilating drops, any number of subjective and objective tests can be made, practically always with the same result, the basic one best vision lens which represents the eyes focusing defect without strain or excessive fatigue.

By enforcing ocular rest for several days, dilating drops often hasten recovery, and reduce the temporary discomfort associated with new glasses. They are sometimes necessary to examine properly the back of the eye. The information needed to diagnose correctly and properly treat the many diseases of the eye and those associated with every part of the body, can be obtained only after the use of dilating drops. Within a few minutes they can usually be completely counteracted. Properly used, efficient glasses are often impossible without the drops; improperly used, they may do harm.

#### SUPERSTITIONS AND SOAP

The keen observation of cause and effect,

which frequently originated popular medical beliefs and superstitions, and the skillful methods of enforcement based upon a firm psychological basis, actually accomplished but little because of one thing, the lack of cleanliness. At various times during the past several thousand years the idea of disease transmission by contact with infected matter seemed to be just around the corner. In some respects, it still is. Cleanliness, seen today, depends heavily upon modern plumbing installation.

Among the ancient peoples, the cleanliness of the Romans was proverbial, a fact which probably affected the rise and the fall of the Roman Empire. The remainder of the ancient world was not particularly interested in physical cleanliness. During the middle ages, personal cleanliness was apparently a lost art, as illustrated by the astounding fact that Queen Elizabeth took a bath about once a month, whether she needed it or not.

Only in the past 75 years have the details of disease prevention by physical cleanliness, both personal and in the surroundings, been even slightly understood. In the past, mental and moral cleanliness received a great deal of attention in popular beliefs and superstitions. Physical cleanliness was usually sadly neglected.

Soap and superstitions don't go together. The people with the most superstitions are usually those who use soap least. The same emotionalism which has accomplished so much in the world of art, easily lends itself to accepting opinions about the unknown without question, and is often not accompanied by a correspondingly strong urge for physical cleanliness, including the use of soap.

#### YESTERDAY, TODAY AND TOMORROW

Although we are living in a world where science has apparently become master, but little has been accomplished practically in defeating two of its greatest enemies. These are human gullability and audacity, which have both played such a prominent part in the healing art. When searching for health, the urge to rely on the intangible is almost fundamental. It has been used constructively and destructively since time

immemorial by those who professed to cure disease. The intelligent layman of today does not wear a nutmeg suspended around the neck to cure styes, but the firms who sell electric belts, radium spectacles, eye exercisers, vitaminized eye salves, and falsely represented eye washes still do a thriving business even in times of depression. New methods of marketing the more passive confidence in recovery and the more active urge to get well are devised by each generation and usually discarded by the next, if not before. For us, the methods now in vogue are apparently the best.

Through history the confidence in recovery and the urge to get well have been linked with other fundamentals of health and happiness, with embryo medical discoveries of varying importance and usually with crude or clever foolishness which obscured the underlying principle of suggestion from the buyers' eyes.

In the future our uses and abuses of these fundamentals as well as many of our highly prized medical ideas and methods will be looked on with the same tolerant smile with which we regard those of a century ago.

It seems a pity that we are not able to harness more constructively the emotional forces of life and especially the confidence in recovery and the urge to get well. Even now they are generally used with but little intelligence and less practicality.

In closing this interesting chapter of ophthalmology a mention of the benefits which the writer has acquired through its study may help and interest other physicians. Relatively little has been written in this field of medicine.

If you want to be disillusioned about the real age of many ideas and methods that are considered ultra modern, interest yourself impersonally in what the world has been doing and thinking during the past several thousand years especially in the healing art. If you want a broader and less prejudiced evaluation of medical ideas not only from the physician's point of view but also from the patient's, an analysis of the underlying factors that have produced and perpetuated some popular medical customs and

even superstitions for ages will possibly help you as it has helped me. A pleasant diversion is the search for the hidden grain of truth contained in popular ideas from which will probably evolve important medical advances. Perhaps you can find one?

\*The writer is indebted to Miss Marie Louise Marshall of New Orleans and Dr. Joseph L. Miller of Thomas, West Virginia, for assistance in preparing this article.

## INOCULATION AND SANITATION IN CONTROL OF TYPHOID FEVER\*

D. V. GALLOWAY, M. D.  
MERIDIAN, MISS.

As early as 1886, Frankel and Simmonds found that several small nonlethal doses of typhoid bacilli would protect rabbits against subsequent fatal doses. In the same year, Beumer and Peoper immunized mice with potato cultures of typhoid bacilli, and by using small but increasing doses they were able to give definite protection subsequently against what ordinarily would have been fatal doses. They suggested the use of sterilized or killed cultures to be used for the immunization of men, but made no investigations or experiments themselves.

All of the earlier work on animals was incomplete and unsafe as a guide in the immunization of man, as at that time there was no way of detecting changes in the blood serum after inoculation and, consequently, no way of knowing that protection had been conferred.

The first actual immunization of men for the purpose of protecting them against typhoid was made by Pfeiffer and Kolle in 1896. They immunized two men and investigated the specific changes in the blood serum thoroughly and exhaustively. They showed that not only were agglutinins produced, but what is more important, the bacteriolytic power of the blood was also raised in the same way as during an attack of typhoid.

\* Read before the Section on Hygiene and Public Health at the Sixty-eighth Annual Session of the Mississippi State Medical Association, Biloxi, May 15, 1935.

In 1898, Wright introduced typhoid prophylactic inoculation into the British Army in India, with results which were on the whole very good and encouraging.

During the Boer War, Wright recommended that the troops be inoculated. Four hundred thousand doses were furnished, but it is not known how many received the vaccine. Statistical reports were poor, the opinions of organization surgeons differed, and although Wright was convinced from the data he had collected that both morbidity and mortality were reduced, the procedure was not popular.

Early in the experimental work it was found that the age of the vaccine had considerable effect upon its immunizing properties. This no doubt accounted for some of the failures during the Boer War.

Even in the early days there was some controversy as to whether or not a virulent or nonvirulent strain should be used.

In 1908, Captain F. F. Russell, Medical Corps, U. S. Army, was sent to Europe to make a study of the methods of inoculation for typhoid fever in use in England and Germany. Upon his return a board of officers was organized to investigate the advisability of immunizing our own Army.

The board was convinced that vaccination was both useful and harmless and recommended its introduction into the Army as a voluntary measure. On June 14, 1910, 92 men of Company A, First Battalion, Engineers, were vaccinated.

Hawley<sup>1</sup>, after an exhaustive study of the effects of typhoid fever vaccine, stated in 1934 that the Rawlings strain might not be the best typhoid vaccine strain; but it was his belief that the Army Medical School sub-strain is no worse today than it ever was. Nor has it been proved that the present state of this sub-strain is not the optimum for the prevention of typhoid fever in men; or that, when the optimum dissociative state has been determined, the Rawlings strain cannot be so maintained.

The navy<sup>2</sup> had been experiencing 25 to 75 cases per 100,000 for several years. Early in 1910 voluntary administration of vaccine was begun and the rate immediately drop-

ped to less than 10. In 1912 vaccination was made compulsory and since that time the rate has been below 5.

Two years ago the Georgia State Department of Health Laboratories made certain changes in the preparation of typhoid vaccine. The most important change was the substitution of a recently isolated "smooth colony" strain of *B. typhosus* as the source of antigen in place of the old "rough" Rawlings strain which had been used almost universally for the past thirty years.

The occasion for the adoption of a new antigen was brought about by the following factors:

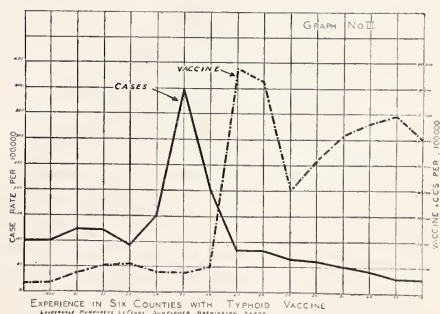
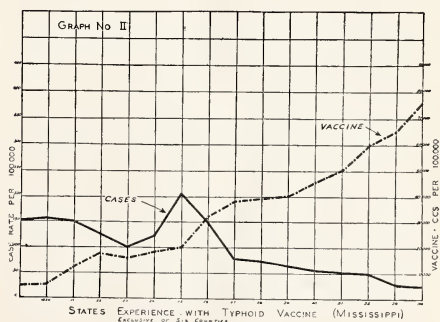
1. An increasing number of reports of failure of the Rawlings strain vaccine to protect.

2. The announcement of certain investigators (Grinnell, Arkwright, Larkum, et al) that most Rawlings strains were "rough" and therefore degenerate and incapable of producing adequate protection against "smooth" strain infections.

In a recent communication to the writer, Dr. Seckinger<sup>3, 7</sup> stated: "We can now add observations on the incidence of typhoid among vaccinated individuals in 1934 during which year I followed up nearly 700 cases and encountered only three who had been immunized within the period of one year with the new vaccine. I am satisfied that the vaccine we are now using is very much more effective than the old vaccine. At one time I was of the opinion that all of the weakness of the old vaccine was due to the Rawlings strain. I now question this since it has been shown that all variations between strictly smooth and rough strains occur among the sub-strains of Rawlings. The apparent weakness of our own vaccine seems to have been due to the fact that the sub-strain of Rawlings we were using was somewhat degenerated. This is certainly borne out by our mouse protection tests. Mice inoculated with the old rough Rawlings strain are promptly killed by the injection of a smooth strain. On the other hand mice inoculated with

vaccine made of the smooth strain are not affected by killing doses of any smooth strain. In fact we have difficulty in getting any kills at all with the old Rawlings strain."

Mississippi was divided into two areas to study the effect of vaccination. The six counties of Lauderdale, Humphreys, Leflore, Sunflower, Washington, and Yazoo were selected as one group population of about 309,703, and the remainder of the state population 1,787,798. As no complete records were obtainable of vaccination for either group, the number of cubic centimeters of typhoid vaccine distributed by years was used and on the graph were plotted as two year accumulations except the first year 1920. An inspection of Graphs II and III shows a definite influence on the typhoid case rate in each instance, although it is not possible to say exactly how much. From the time the vaccine distribution reached a height of 25,000 c.c. per 100,000 persons there has been no further peaks and the trend is steadily downward.





Efforts at sanitation employed by the public health movement have as their basis the proper disposal of human excrement. A generation of sewer builders has succeeded in greatly reducing this source of pollution in our larger cities. Then came the organization of sanitary water supplies, and finally such auxiliary control measures as the supervision of food supplies, the control of milk production and distribution, including pasteurization. The supervision of "carriers," the attack upon the fly menace, the movement for rural sanitation, and antityphoid vaccination in polluted areas have rounded out the general program of complete control.

Let us now examine, in the light of some historical series, what has been the effect of the various measures adopted against the spread of the disease. A good example is that of Chicago, but much the same story could be told of any large city of the United States. During the first half of the period 1880 to 1934, even when there was no severe epidemic, the general level of mortality throughout remained high. Quite different is the picture presented by the later half of the series, in which peaks of 53 in 1896 and 45 in 1902 stand out as what we to-day would consider very bad epidemics, though they are far below the level of the earlier figures. Since 1902 no outstanding peaks have occurred, and the death rate from typhoid fever has followed a steady course that may well be regarded as its approach to virtual extinction.

So much for bare figures. What are the facts underlying these peaks and valleys in the curve? In the very early part of the series of years shown in the diagram, Chicago used to take its water from Lake Michigan, the intakes being located near the shore. It is not surprising that under these conditions severe contaminations occurred. In 1867 the first step was taken toward improving the method of collecting the water from the lake.

The terrible epidemic of 1891 is perhaps not fully understood. Simultaneous epidemics occurred in many other cities, in addition to Chicago. The rather steady decline in the curve for Chicago which may be said to begin with

the year 1896 was ushered in by the introduction of the Widal tests and daily water analyses. In 1900 the Chicago Drainage Canal was opened. Over the period 1905-1908, intercepting sewers were built to minimize lake pollution. The first pasteurization ordinance was passed in 1908. In 1912, experiments with chlorination were begun. Chicago today watches every case of the disease, and recovered patients are not permitted to engage in any occupation involving food handling until the Health Department's laboratory examinations show that the patients are free from typhoid bacilli. Vaccination against typhoid fever is also encouraged, and, of course, there is stringent examination and control of the sanitary qualities of shellfish. The department also makes every effort to find typhoid carriers. That all of this work has been effective is shown by the fact that in 1933 the typhoid death-rate was three per million, representing 78 cases and 12 deaths in the city of Chicago<sup>4</sup>.

While vaccination and sanitation are being considered, we must not neglect one special feature of typhoid fever control and that is specific measures for the control of carriers. Cummings<sup>5</sup>, in referring to an outbreak in Washington in 1922 said, "About 400 persons attended a church supper. In forty-four of these typhoid developed, and four died. In the resultant investigation by the department of health, all foods served at the supper, except one, were ruled out as sources of typhoid infection. This was the potato salad; this one food had been eaten by all those taken sick. The dressing used in this salad was eliminated from suspicion, because it had been boiled. It was evident, then, that the potatoes alone were the vehicle of typhoid transmission.

"In the preparation of the salad, the boiled potatoes while still warm had been peeled and diced by four women. During this peeling and dicing process, hands, soiled with typhoid bacilli, had deposited their germs on the potatoes. The pans containing this food had been covered with towels and set aside until the next day, thus retaining the warmth and providing an excellent culture medium; consequently, contamination was multiplied many times.

"Two of the four women who had peeled the potatoes proved on examination to be typhoid carriers. One of these had a history of typhoid fever twenty-two years previous. In the interim there had been six cases of typhoid in her immediate family; in the case of the other carrier, no history of the disease could be secured. It is interesting to note that an examination of specimens from both carriers in 1927, five years after the outbreak, showed that they still harbored typhoid bacilli.

"In the department's laboratory, we were able to duplicate the transmission phase of this outbreak. Both carriers were prevailed on to boil, peel and dice a number of potatoes. These were then taken to the laboratory where they were incubated for twenty-four hours, then examined for typhoid bacilli. The organism was isolated from only one of the two specimens. It is noteworthy that the carrier who prepared the specimen found to be negative had insisted on thoroughly washing her hands before the operation was undertaken.

"As the next step in the investigation, we undertook to determine the influence of hand cleanliness on typhoid distribution. First, the hands were lightly contaminated with typhoid bacilli. Boiled potatoes were prepared and incubated. There were four such tests, and typhoid organisms were isolated in each experiment.

"In the next series of tests, the hands were contaminated with typhoid, then thoroughly washed with soap and running water; the potatoes were then prepared as before. Four such tests were made, and all proved negative, indicating the importance of clean hands in breaking the chain of transmission."

Within a given area, the typhoid hazard of the population will depend upon

- (1) the number of foci infection,
- (2) the openness of channels along which infectious material travels, and
- (3) the proportion of susceptibles in the group.

If there is a large number of each of the above, there is proportionally greater danger that typhoid bacilli will find their way from

one of the foci, through some open avenue of infection, to one of the many persons who has no resistance to the disease.

It is important to bear in mind those differences in results to be obtained through environmental sanitation in the city on the one hand, and in the county, on the other. Blocking of intermediate channels of infection in a city situation is practicable and eliminates typhoid, except for sporadic cases or occasional outbreaks when some barrier breaks. In rural areas, endemic typhoid may persist in spite of attempts at environmental sanitation. These statements may appear iconoclastic, but should not be so considered. Rather, they are made in an effort to offset the assumption that in a rural situation a sanitary privy program will serve the same purpose as sewers and a protected water supply in the city. By all means, let the rural health officer conduct a program for safe disposal of human excreta and for protection of water supplies; but let him not forget that there are distinct limitations to the instruments used, that completeness of installations is difficult to obtain and more difficult to maintain, that sole reliance may not be placed on such measures.

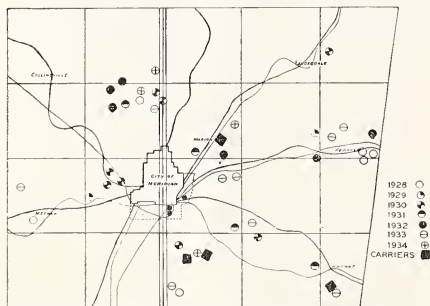
From the writer's<sup>6</sup> experience this may be cited. In a Southern county, 11,760 persons received typhoid vaccine during a period of five years; about 22,000 others, living under similar conditions in the same county, did not. In the vaccinated group there were eight cases of typhoid fever and no deaths from that disease; in the unvaccinated group, 265 cases and 37 deaths. In view of this and other experiences, it seems justifiable to regard typhoid vaccination as an important method for control of typhoid fever, and with avenues of infection still open, as a necessity for mass protection, in that it decreases the number of susceptibles in the population.

The discovery of foci of infection depends upon the thoroughness and intelligence with which the search is undertaken. This search must be a never ending affair, with continuing accumulation of usable information which is used. The focus of first importance is the current case. This current case was caused

by some other focus and is itself, potentially able to engender additional foci. In order to discover both source and spread contacts of this case, the health officer must furnish facilities for and encourage prompt diagnosis, immediate report, quick and complete investigation and effective control measures in each instance. He may to some extent measure his performance in investigation and control by determining, on an annual basis, the per cent of cases in which he discovered the focus (not the channel of infection) and the per cent of known clinical cases which gave rise to secondary infections.

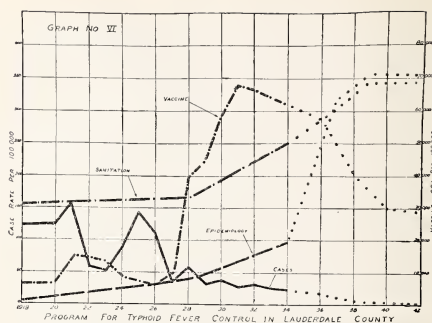
Chart No. V was prepared to aid in the control of typhoid fever in Lauderdale County and shows the kind of grouping that a year to year accumulation of cases will show. The groups indicate the areas in which intensive search should be made for foci of infection and also the areas which should have special attention in the immunization and sanitation program. To date seven carriers, who may have been the source of infection, are spotted on the map.

TYPHOID CASES AND CARRIERS  
LAUDERDALE COUNTY 1928-1934



Realizing then that vaccination, sanitation and epidemiology are all of undoubted value in control, the next problem is just how to employ those instruments in the plan.

Chart No. VI<sup>8</sup> is intended to show the different phases of the plan of control in Lauderdale County. The first period is from 1920 to 1927, during which time sanitation was 30 per cent to 40 per cent, vaccination rate less than 10,000 c.c. per hundred thousand, and epidemiological study less than 5 per cent effective. The typhoid fever rate was high and fluctuating, being from 50 to 150 per 100,000.



In 1928 the Health Department was organized and an immediate intensive mass vaccination of people instituted. Sanitation in the city and county was improved up to a point of about 70 per cent effectiveness. Epidemiology did not receive so much stress, as the case load was too overwhelming, but records were started.

By 1934 the case rate had fallen to around 28-30 per 100,000 and it seemed time to institute new tactics; consequently the new plan is to reduce mass vaccination to a low level and instead use selective vaccination; selecting, (1) contacts of cases, (2) contacts of carriers, (3) residents of high typhoid incidence areas, and (4) school children. This group has a long life ahead and for one of them to have a case and become a carrier is a real calamity, both to him and the community. This program should reduce the amount of vaccine used to about 25,000 c.c. effective per 100,000 (vaccinate annually 5,000 per 100,000 population) and possibly we could remain on this level for several years.

Epidemiological control of cases will be made as nearly 100 per cent as possible by study of all cases for source, and if carriers are found they will be supervised to prevent food handling or dangerous contact of any kind with the community. They will be taught personal hygiene and asked to sign an agreement to protect the community in all ways possible. Annual stool and urine cultures will be made to determine the infectious state of the carrier.

Sanitation will not be neglected but simply the installation of a privy will not be considered adequate sanitation. All homes must be

equipped with hot and cold running water, inside bathrooms, protected water, and screens before they are considered completely sanitized.

#### SUMMARY

1. Typhoid vaccine in adequate dosage given to groups of people to an effective rate of 25,000 c.c. per 100,000 persons annually or more, will influence the typhoid fever case rate and if given to more than 90 per cent of the population will control it.

2. Sanitation alone will greatly reduce typhoid fever, and in conjunction with other aids will control it.

3. The carrier is the source of infection in an increasing per cent of the total cases, as control measures become effective case to case infection is relatively easy to prevent.

4. Mass typhoid immunization should be abandoned, and selective immunization used as soon as a stable low case rate is attained. Selective immunization is aimed to protect those known to be in especial danger from cases or carriers or from environmental factors.

5. Complete epidemiological study of cases is difficult while the case rate is high, but records may be prepared for us in such study, as soon as the case rate is reduced by vaccination or other factors.

6. Final reliance for typhoid fever control in an area should rest on intensive case and carrier work and sanitation, meaning sanitation in its broadest aspects of ensuring good personal hygiene.

7. Lauderdale County has apparently reached a low stable incidence of typhoid fever and is ready to reduce mass immunization in favor of selective immunization, sanitation, and intensive case and carrier control.

8. The State of Mississippi is probably ready to gradually reduce mass immunization as a policy in counties with full time service as a low stable typhoid case rate has been attained. However, this can only be done if intensive epidemiological study and control of cases and carriers is instituted and maintained and a high degree of sanitation is reached.

#### ACKNOWLEDGMENTS

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1. Paul R. Hawley, M. D., Dr. P. H., Washington, D. C. James Stevens Simmons, M. D., Washington, D. C. "The Effectiveness of Vaccines Used for the Prevention of Typhoid Fever in the United States Army and Navy."
2. S. S. Cook, M. D., Dr. P. H., Washington, D. C. "Efficacy of Typhoid Prophylaxis in the United States Navy."
3. Daniel L. Sockinger, M. D., Dr. P. H., Atlanta, Ga. "Epidemiological Studies Upon Typhoid Fever in Georgia: Problems Associated With Its Control."
4. Statistical Bulletin, Metropolitan Life Insurance Company, New York City. "Half a Century of Warfare Against the Typhoid Fever Bacillus."
5. James G. Cumming, M. D., Dr. P. H., Washington, D. C. "Should The Barriers Against Typhoid Be Continued?"
6. Harry S. Mustard, M. D., Baltimore, Md. "Typhoid Fever Control With Special Reference to Residual Typhoid."
7. T. F. Sellers, M. D., Atlanta, Ga.: Personal communication.
8. A. L. Gray, M. D., Jackson, Miss. "The Importance of an Epidemiological Investigation." (State Medical 1934).

Also, although not quoted specifically, the writer feels deeply indebted for permission to read papers and personal communications from the following authors:

1. T. W. Kemmerer, M. D., Jackson, Miss.—Personal communication.
2. W. S. Leathers, M. D., Nashville, Tenn.—Personal communication.
3. H. A. Kroeze, C. E., Jackson, Miss.—"A study of the Effectiveness of Rural Excreta Disposal."
4. F. J. Underwood, M. D., Jackson, Miss.—"Appraisal of County Health Work Based on Reduction of Morbidity and Mortality." (La. State Medical—1931).
5. J. B. Black, M. D., Murfreesboro, Tenn.—"Typhoid Fever in Rutherford County."
6. Dr. W. C. Williams, Nashville, Tenn.—"The Typhoid Fever Control Program and the Results of Twelve Years Work in Williamson County, Tenn." (Amer. Pub. Health 1934).
7. Miss Carolina R. Randolph, New York City—Statistical Data.

#### DISCUSSION

Dr. Robert E. Schwartz (Hattiesburg): Dr. Galloway's paper with his illustrations I think is self-explanatory to all of us and it is very interesting, especially to note the effect of our typhoid vaccines along with the decline in the number of cases of typhoid fever. Being interested in the health education angle of our public health work, it has been very interesting to me to note in the last six years, the number of students entering our state colleges that are immunized against typhoid fever, as compared to those of six years ago. It is also very interesting to note in view of those charts, the great number of students entering our state colleges who are not immunized against typhoid fever. I believe on checking up you will find that most of the students in the colleges who are not immunized are from those counties who do not



have an active health unit. I may not be correct in that, but I believe we will find that this is correct. Also it has been very interesting to note the number of our public school teachers who are so ignorant of the means of transmitting and the prevention of typhoid fever. In my tests I usually get contact with most of my public school teachers on many of the phases of health education. It is appalling to note the ignorance of those we have teaching our children along some of these lines of health education. We are trying to teach them,—these prospective teachers, the main essentials of sanitation to prevent these invasions and especially those along the line of typhoid fever, diphtheria and tuberculosis.

Now in the handling of, or trying to immunize these college students, I find it very hard to get some of them to take the inoculation or vaccination. I have been finding it a little bit easier the past year, especially when we can tell them we can give them the vaccine that does not knock them out, or does not make them seriously sick. I refer, of course, to our sensitized vaccines. I do not know if they will last as long as the other forms of vaccine; also this new vaccine they are giving orally, I am very interested in what the profession is going to think of the oral vaccine against typhoid fever. I still think that our major point to carry out to do away with our mass immunization in favor of selective immunization has to be reached through our educational department, and of course that in conjunction with our public health department is absolutely necessary.

Dr. A. L. Gray (Meridian): In the study of typhoid intensively in six counties of Mississippi in the last two years, we have come to some very definite conclusions about the source and mode of transmission of this disease at the present time in Mississippi. No doubt but that in 1925 our case rate was very high. For instance in Leflore County we had 250 or 300 cases in one year. No doubt our best method of control was mass immunization. We are willing to submit to that. Since that time our case rate has dropped immensely, and within the last five or six years it has reached more or less stable incidence. We find in going into the records in the various health departments that in some of the counties at the present time to reduce the typhoid incidence by one case by mass immunization alone without selectiveness we would be required to give at least 4000 people immunization in that county. To prevent one death on the same basis we would be required to give 9000 complete immunizations. Are we justified in going ahead with that type of schedule in preventing typhoid fever? After studying this problem closely I feel that we are not justified in going ahead from year to year with our

mass immunization, when in given counties we are having from no cases to 15 or 20, and in those same counties we are giving from 5 to 40,000 doses of vaccine. We are not all exposed to typhoid fever. It is true in 1925 a large percentage of us were exposed to typhoid, but through the use of mass immunization whereby large groups of people were immunized, this chain of infection was more or less broken to the extent that at the present time our incidence has come down to a very low level. Yet our typhoid fever problem is not solved, because if we let up on our mass immunization and mass sanitation without substituting some other method of control, the typhoid incidence will probably go up in a few years. Now, it is not Dr. Galloway's idea, I am sure, that suddenly we reduce our mass immunization program. Instead I think his idea is this—that as our individual case study goes forward from year to year, that within a period of five to 15 years, we will have located a large enough percentage of the carriers who are causing the cases that our immunization scheme can then be limited to those who are most intimately exposed to those carriers.

In the study of these several cases in these counties in the last two or three years, we find that the usual history around the typhoid carrier is this—that maybe in 1904 the father or the mother or the grandmother had typhoid; that every two or three years since that time there has been a case of typhoid in that family, or in some close contact with that family. Those most usually and most intimately exposed to carriers are first, of course, the members of the household in which the carrier exists, and second, the close relatives who live nearby and are frequent visitors in the carrier's home, and third, close neighbors who are intimate friends of the carrier and are visiting the carrier frequently. Now we feel that with our thorough study of every case we will find carriers that are causing our cases of typhoid fever, and that going further we will find from questioning the family of the carrier the individuals that are most likely to be exposed to the carrier outside of the family. Knowing those individuals who are most likely to be exposed we put forth especial effort to get those individuals immunized every two years, because in those groups of people who are in close contact with the carrier we should take no chance, and should see that those individuals get this immunization as frequently as possible, at least every two years. As that scheme increases and a large percentage of our carriers are located then our mass immunization can, and I feel should be decreased, because thousands of people in Mississippi are getting typhoid immunization, who are not likely to get typhoid fever. Of course, after we have located

our carriers there is quite a bit of educational work to be done among the carriers' families and with the carriers. This individual must be taught in simple language how he is likely to give the members of his family, neighbors and relatives typhoid fever, and that he should refrain from doing those things that would give those individuals typhoid fever. Through that method we find that the most ignorant colored women will soon catch on to what you are trying to put across. Some individual might say we can not go far with our education especially with the colored people, among whom we are finding most of our carriers. In Leflore County we found a carrier that was a colored woman about 45 years old. She was an ardent church worker, and, as is usual in the colored communities she attends one or two large dinners every summer at the church. We had gone to this carrier and told her that she should not do so and so, and among other things that she should not handle food to be consumed by anybody other than the members of her own family. She had always responded to the church dinner affair by carrying a well filled basket. It so happened that shortly after our instructions to this colored woman, they had the usual church dinner. Mary went out without her basket. The parson was very much astonished and asked her what was the trouble, and she replied that the health doctor had told her she must not handle food for anybody other than her own family. It so happened that in that particular community there had been five or six cases of typhoid among her neighbors within the past four or five years.

Dr. H. C. Ricks (Jackson): I believe Dr. Galloway is going right down the middle of the road with what we all believe is a possibility in the future. There are some warnings that I want to drop here about typhoid vaccine. I am glad that Dr. Schwartz mentioned this so-called desensitized vaccine that is being put out by the commercial houses.

It is indeed remarkable that some individuals are so afraid of a reaction following the administration of typhoid vaccine. The desensitized vaccine possibly does not produce a reaction as severe as the vaccine produced and distributed by the State Board of Health. The real question is—does it provide the same protection to the individual inoculated. There is reason to believe that the reaction following the administration of typhoid vaccine is governed to a very large extent by the number of organisms per c.c. of vaccine administered. The reaction may be reduced to some extent by repeated washings of the vaccine suspension, the cost of which is out of proportion to the reduction in reaction.

The United States Army, in 1925, reduced the

organism content of its typhoid vaccine in order to reduce the reaction following its administration. As a result of this reduction in bacterial content of the Army vaccine, there was an increase in the incidence of typhoid fever reported in the personnel of the Army.

The typhoid vaccine used by the United States Navy is prepared by the Army Medical School. The Navy did not have the bacterial content of its vaccine reduced in 1925. There was no reported increase in the incidence of typhoid fever among the personnel of the Navy as occurred in the Army.

The vaccine prepared by the Hygienic Laboratory of the State Board of Health has 1,000 million killed typhoid organisms per c.c. You may get some reaction but this is of no importance when the immunity produced is being considered. This vaccine is distributed without cost to any physician in Mississippi. More than 700,000 c.c. were distributed and more than 600,000 doses reported administered in 1934 with no serious reaction reported.

Typhoid vaccine as any other biological product should be stored at a temperature between 38°F and 50°F, if it is to retain its potency. Do not use typhoid vaccine or any other serum or vaccine that has been stored in a candy case or on a drug store shelf. Some of us have been guilty of placing vaccine and other biologics in our instrument cabinets and on the floors of our offices. This practice is forbidden by State Board of Health regulation, so please let's keep our biologics properly refrigerated and get the results we expect when we administer them.

Mass immunization may be discontinued at some future time; however, so long as we have the number of carriers, known and unknown, that we now have and so long as the typhoid incidence in neighboring states is as high as it is we must depend on and encourage typhoid immunization at every opportunity.

Dr. F. M. Smith (Vicksburg): Once upon a time a man climbed into a sycamore tree to see above the crowd, and when the Great Teacher passed by he said, "Come down Zaccheus" as if to say "be with the common people." So I was at home down there on the floor with the rest of you, yet you demand that I get up here in front of the amplifier. Nevertheless, I am at home again today when I heard this excellent paper brought to us of our "old enemy," one of the "filth borne" diseases. It has been of intense interest to read and listen to this comprehensive discussion of typhoid fever, how it may be prevented, etc. The paper has begun with a discussion of the strains in the immunization vaccine that were used years ago, has briefly referred to the rough and slick colonies, has discussed the question of protection

offered by typhoid vaccination that has come up in recent years, has dealt with the value of sanitation in its broadest sense, has emphasized the importance of supervision of food handlers, etc. Much could be said, but let me invite your attention briefly to the summary. You have a copy of the paper before you, and I will ask you to turn to paragraph 2: "Sanitation alone will greatly reduce typhoid fever, and in conjunction with other aids will control it." If we could perfect sanitation, if every iota or particle of human excreta, the excretions from the urethra and the bowels, could be properly disposed of, we might say that we would have a perfect control of typhoid fever. But inasmuch as this is not attainable, inasmuch as we have carriers who may contaminate their own hands and fingers, there is this problem that arises and here is another broken link in sanitation. Should we vaccinate every individual with the required or recommended amount of vaccine, we have no way of determining the potency of this vaccine, nor can we fully accept as yet the practicability of reading the changes in the blood, the agglutinating properties and the bactericidal factors for determining who is successfully vaccinated. We have no way of determining the mass infection that this individual may afterwards get, and though we vaccinate everybody a certain percentage of vaccinated people will develop typhoid fever. Therefore, we cannot claim that vaccination within itself is absolutely positive in its control.

Second, he says: "The carrier is the source of infection in an increasing per cent of the total cases." That is perhaps entirely true. I am wondering sometimes though if we are not getting the idea that carriers are only confined to that class of people known as food handlers? Do we realize there may be carriers in other walks of life? Do we realize that the deposits of excreta from these carriers harboring typhoid germs may under favorable conditions in the out-door toilet keep potent and virulent these organisms, that they are not killed by freezing? Is it not evident that carriers have a way with the assistance of the house fly, etc., of transmitting the typhoid to us other than by food handlers.

Let us consider the further part of that paragraph: "case to case infection is relatively easy to prevent." Probably it is now true that we have few cases coming from cases, but in small towns and rural districts in North Mississippi a number of years ago, when a family developed typhoid they threw out on the ground or deposited in an open toilet the excreta from the case, and

those who waited on the patient would go from the bedside to the old fashioned well and put their contaminated hands on the bucket or rope and thus carry infection into the drinking water, and the friendly hog who sheltered himself in the shade of the old open back toilet and wallowed in its filth afterwards rubbed himself against the curb of the well, and the water became a source of infection, and I am wondering if that chain has been entirely broken.

I want to invite your attention to the next paragraph: "Mass typhoid immunization should be abandoned, and selective immunization used as soon as a stable low case rate is attained." That may be eminently correct, but the question arises in my mind, has that been proven yet? Can we abandon mass immunization inasmuch as our susceptibles reproduce themselves perhaps in two years after vaccination, inasmuch as there is doubt about vaccination being 100 per cent proof.

Now "selective immunization is aimed to protect those known to be in especial danger from cases or carriers or from environmental factors."

Now, if we wait until we have a case, until we begin to vaccinate, I am afraid we have lost the battle to a great extent.

Immunization must be given, to protect, at least three months before protection is needed. Of course, where there is a carrier in the family others should be immunized for that carrier lives on. With this and other facts in mind I am wondering if we are ready to abandon mass immunization as yet?

Briefly in concluding I would like to emphasize that typhoid fever is a menace to every individual. A certain percentage of the people immunized may reduce the case rate, but there is always that individual here and yonder who will develop typhoid fever and perhaps lose his life. It is inconvenient and painful to go through that three weeks' experience that we have from vaccination. I would be glad to see it reduced—I would be glad to say "let's lay down the burden of immunization" but if some one here and yonder must pay the price for this with a case, at times a fatal case of typhoid fever, the inconvenience of vaccination fades into insignificance in my mind in evaluating the responsibility we have to that individual and to that family.

Dr. Galloway (closing): I do not have anything further to say. I had my say a while ago. Thank you.



THE VALUE OF BLOOD  
COAGULATION\*GEORGE E. ADKINS, M. D.  
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The practice of routine blood coagulations receives no defense at my hands, neither do I offer condemnation to the practice as a routine, if some one wants to make it a part of their examination. I appeared in the field of medicine and served rather an extensive internship in a pretty thorough hospital and heard nothing of a coagulation test until a few years later.

I had gone along doing ear, nose and throat surgery with an occasional bleeding that necessitated additional attention but fortunately, and for which I am very thankful, had no fatalities, but as time passed on I noticed many articles in journals on the subject and later found a friend of mine in the courts as the results of a fatal hemorrhage following a circumcision in less than a week old patient. In the course of the court proceedings the lawyer laid great stress on the coagulation time, and in such cases it is certainly of value. This, along with the general trend of things caused me to resolve that I would operate upon no cases unless a coagulation time was taken and then only when the coagulation time was in the normal range.

Within one week after the beginning of the routine coagulations I felt that I was well repaid when we landed a case with a coagulation time of eight and one-half minutes, although the case was a female and had been previously operated on for a goiter. This patient was put on calcium and asked to report again in fifteen days at which time the coagulation time was found to be thirteen and one-half minutes. When asked what could be done, I quoted from a friend of mine who had removed one tonsil and had rather a difficult bleeding, "as far as I am concerned they have found a permanent resting place." A few days later we checked up another, an adult female, that gave us a

coagulation time of seven and one-half minutes. This case was treated for ten days and returned with a coagulation time of ten and one-half minutes. After the second case had been stamped as a bad risk I was told by the first patient's husband that the home physician had removed the tonsil and had no bleeding. I took shelter under the old adage of "fools rush in where angels fear to tread", but when I landed the third case again, an adult female with a coagulation time of ten minutes, a niece of a good physician who was to treat her for a few days and when just one week later the coagulation time was found to be three and one-half minutes I thought I had found the remedy, but later when the uncle informed me that he had done nothing I began to think that probably there was something else to learn so I began to take the coagulation time and when found over the normal to retake every few hours.

Four more cases of extended coagulation times were noted in the records making seven out of one thousand extending over a period of three years, six of which were adult females, four mothers and a boy seven years old who only gave a coagulation time of six and one-half minutes. We found, from repeated tests, that on the same day that there was a tremendous fluctuation in the coagulation time and recorded one girl who dropped from ten and one-half minutes to three and one-half minutes in one hour.

Our method of testing was to fill three capillary tubes from each case and we noticed that the second tube always, and as a rule the third tube, coagulated before the first. This we accounted for by the bruising of the blood platelets as the first drop came, apparently, without being squeezed out, the third pressed firmer than the second. In this series there were only three cases refused tonsillectomies; one of these, as already stated was operated on by some one else and without trouble. Later, I learned of some of the fallacies of the test and operated upon the other two neither of which had trouble.

It is not my intention to enlighten the medi-

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cal profession, however, I hope this article will be of value to some, but I do think there should be something of record along this line to be referred to when some one becomes a victim of the courts. Naturally, from the results that I have tabulated, the practice of blood coagulations as a routine has been discontinued, however, when it is mentioned by the patient or some member of the family we gladly do the test for this again would be a support in a legal battle if an accident should occur. I was rather gratified to read from an article from the Manhattan Throat Clinic that they have discontinued the routine coagulation tests.

As I mentioned before, this series consisted of one thousand cases, extending over a period of three years, and that only seven cases were found to require more than the normal time for coagulations, six of which were female and four of this number being mothers, and one boy seven years old who only went six and one-half minutes. We have always been taught that bleeding tendencies in the male were much stronger than in the female. This we did not find true, and it has been my conclusion that when a patient is losing blood it is very probable that it is coming from a vessel and not a denuded surface. I take no stock in the so-called "oozing".

There are many things, apparently, that affect the coagulation time, such as fright, hyperactivity on the part of the patient, chronic malaria, jaundice and probably the hyperthyroid cases have some bearing. I do not think that arterio-sclerosis or high blood pressure plays any part. It has been my experience that people with high blood pressure coagulate rather quickly. There are a few mechanical apparatuses that tend to change the coagulation picture; such as, the sharp or blunt needle with which the puncture is made, the size and temperature of the capillary tube would all have to do with it and certainly the act of pressing the blood through the opening has a considerable bearing on the coagulability of the blood. Apparently, the slightest bruising of the blood platelets shortens the time considerably.

#### DISCUSSION

Dr. E. LeRoy Wilkins (Clarksdale): I feel that this paper is too valuable to go without some discussion. And speaking of this loan business, I want to take a shot at somebody. We, the Eye, Ear, Nose and Throat Section, are supposed to have two papers to appear before one of the general sections, Medicine or Surgery, and you did not invite anyone but George Adkins. I am sure that you could not have invited a better one. We were made to promise, before we were permitted to form a separate section, that we would present two papers, each year, before the general sections. Our section is ready to do just that.

Dr. Adkins has told us some things that I am sure many of us have wanted to know, and have been searching out. His paper shows a great deal of study and work. I am glad that the strict routine taking of clotting time is being discontinued. In questionable cases it is necessary. I have had some cases, three in particular, where I have had severe bleeding after operation, whose clotting time was taken at less than five minutes. I have operated upon others with clotting time of eight or nine minutes, without the least trouble, taking little precaution in advance. Certainly we should ask enough questions to ascertain if there is a bleeding tendency, then make the test and in the long cases take the necessary precautions. I no longer take the coagulating time as strict routine. Only in those cases where there is some question, or the patient requests it.

We want to watch those oozing cases that Dr. Adkins mentioned, more closely, and I am sure that in almost 99 in 100 the bleeding will prove to be coming from a small vessel that we did not tie, or that has broken loose. Particularly is this true in tonsillectomies.

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#### SO-CALLED AGRANULOCYTIC ANGINA WITH SPECIAL CONSIDERATION OF THE CAUSAL AGENTS\*

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and

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Following the first replete description of "agranulocytic angina" by Schultz in 1922 there was comparatively little activity recorded in medical literature concerning this disease. During the past five or six years, however, numerous case reports with various suggestions

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as to the causation and a few articles dealing with experimental investigation have been published.

Like certain other diseases wherein the name primarily given does not accurately apply, a number of suggestions in this regard have followed such as malignant neutropenia, mucositis necroticans agranulocytica, granulocytopenia, granulopenia, etc. While we feel that from the hematological standpoint a name such as granulocytopenic leukopenia is applicable, this does not include certain clinical phases that are more or less constant; in addition to this fact, the apparently protean causative factors would justify the designation, "Schultz syndrome" as the simplest and most fitting.

#### CLINICAL

These cases present a fairly characteristic clinical picture. The onset of the disease is rather sudden and the patient complains of great weakness, some cases even show extreme prostration. Pallor, a slight degree of fever, a poorly functioning heart and necrotic throat lesions are seen in a majority of cases. Lesions of other mucous membranes such as the vagina or intestine, may occur. The disease occurs more often in the middle-aged white female.

It is to be noted that this disease is typified or recognized by the very striking leukocytic picture of depression of the total leukocytic number and marked diminution or absence of granulocytes with replacement especially by lymphocytes. It is, however, to be stressed that many of the blood dyscrasies, such as acute aplastic anemia, aleukemic lymphatic leukemia, aleukemic lymphadenosis and various other related diseases may present somewhat similar pictures of leukopenia and relative lymphocytosis with granulocytopenia. These features point out the primary irregularities in marrow function or constitutional factors influencing secondarily such hemopoietic structures and are, therefore, of importance in the consideration of this disease. Such phases of the subject confront us at once with the question of etiology or causation.

#### CAUSATION

Through various publications relative to pos-

sible or probable causes, it is to be appreciated that this subject must be approached by the discussion of each possible factor. Such articles have advanced either a special agent or have summarized some of the ascribable factors. Kracke and Parker's recent publication<sup>1</sup> presents a rather replete and comprehensive survey of this phase of the subject under the following headings:

- (1) Bacteria—living and dead (vaccines).
- (2) Chemicals and drugs.
- (3) Allergy.
- (4) Endocrine disturbances.
- (5) Radiation—Thorium "X".
- (6) Bone marrow—idiosyncrasy.

The general facts and pertinent literature connected with each of the above attributed factors are set forth in Kracke's publication to which the reader, if interested, is referred. It is our intention, herein, to briefly discuss each presented cause.

(1) *Bacteria*. Microorganisms recovered especially from the throat lesions and to some extent from other sources, blood, intestine, etc., have all been mentioned and form a rather varied and bizarre group such as the streptococcus group, staphylococci, pneumococci, *B. enteritidis*, *B. pyocyaneus*, *B. coli*, *B. proteus*, Vincent's organisms, *B. welchii*, *B. suispestifer*, etc. With the last named microorganisms, Fried and Dameshek produced in rabbits granulocytopenia. Most of these bacteria, however, when injected into laboratory animals yielded negative results. Dennis<sup>2</sup> employed rabbits and introduced into the peritoneal cavity various bacteria contained in parchment capsules. He produced through the diffusion of the toxins some degree of granulocytopenia. In our experiments<sup>3, 4, 5</sup> we employed toxic filtrates derived from peritoneal exudate by primarily producing in guinea pigs a peritonitis with *Streptococcus aureus*, *B. enteritidis* and *Streptococcus hemolyticus*. We, also, used the toxic filtrates of *B. welchii*, produced in vitro. The cultures of *B. welchii*, *Streptococcus hemolyticus* and *B. enteritidis* were obtained from the intestinal tract and the *Staphylococcus aureus* from the blood of a case of "agranulocytic angina." The

respective filtrates were injected subcutaneously, intraperitoneally and intracardially into various series of rabbits and guinea pigs. We were able, with repeated injections of such in vivo prepared filtrates, to produce reduction of the number of leukocytes as a whole and of the granulocytes in particular. This method of obtaining toxins had been employed by one of us<sup>6</sup> in previous experiments upon the production of the pathology of typhoid fever with an accompanying leukopenia as low as 1000 cells per cubic m.m.

Several records of marked granulocytopenic leukopenia following the intravenous injection of typhoid vaccine (killed bacteria) have been published. One such unpublished case occurred here in New Orleans at the Touro Infirmary<sup>7</sup>.

The experiments with bacteria or their toxins that have been reported show only the fact that it is possible by varied procedures to reduce the total number of leukocytes and granulocytes through such means. They suggest only one of the procedures through which the blood picture of the Schultz syndrome may be produced. In this connection the striking granulocytopenia and leukopenia produced occasionally by the intravenous injection of typhoid vaccine, is an indication of how, upon certain provocation, the leukoblastic balance may be disturbed.

In connection with bacterial poisons, it must be noted that a great percentage of typical cases of the disease show necrotizing and destructive lesions through which bacteria and their poisons may invade. Although it has been contended that such lesions are secondary to a primary neutropenia, it is to be remembered that cases do occur in normal people wherein a tooth extraction has been followed by extensive ulceration, neutropenia and death. Piney<sup>8</sup> cites a case of fatal peritonitis following gangrenous appendicitis in which the leukocytes were 900 per cu.m.m and 700 of these were lymphocytes. Other instances of overwhelming infections may also show such blood changes and certainly acute cases of so-called agranulocytic angina are often of this character.

(2) *Chemical*: We are all familiar with the depressant or destructive properties of benzol or benzene upon leukocytes. Selling<sup>9</sup> in 1910 reported in Baltimore, cases caused by inhalation of benzene vapors from the soldering of cans, in which instance not only did leukopenia and granulocytopenia occur but also manifestations of purpura. This same observer<sup>10</sup> later produced similar leukocytic changes in rabbits by the injection of benzene and olive oil. Hektoen<sup>11</sup> later confirmed these experiments. From these observations ensued the employment of benzol in the leukemias.

With the stimulation of interest in so-called agranulocytic angina, there have appeared numerous case reports in which many different drugs containing a benzene ring were held accountable for the causation of this disease. Madison and Squier<sup>12</sup> have emphasized this factor as a cause and considered that an added amine is essential. Their experiments upon animals, however, were unsatisfactory. In a recent article Kracke and Parker<sup>1</sup> present a compilation of factors and observations of cases which tend to show the relationship of such drugs to agranulocytic angina. The following drugs are enumerated: Amidopyrine, arsphenamine, neoarsphenamine, acetanilid, phenacetin and certain barbiturates attached to the benzene ring. It is considered that there must be an attached amine group. They further stated that they have injected a large series of animals intravenously with hydroquinone, catechol, aniline, para-aminophenol, quinone and phenol and only an occasional animal showed a mild or severe grade of neutropenia.

While barbiturates have been used more in the last decade, various other preparations including acetanilid and phenacetin date back a very long time. Herein, we again find no proof of causation of the Schultz syndrome but rather leading arguments and observations that may or may not apply in a given instance.

(3 and 4) *Allergy and Endocrine Disturbance*: These have each been advanced as causes and in certain instances appear to be connected in some manner with the etiology of the disease. Allergy after all represents a form of poison which may possibly at times bring about inhibition of the cells concerned herein. Relative to the endocrines, certain experimental observations have demonstrated that such leukocytic blood changes may be produced. Thus Britton and Corey<sup>13</sup> observed marked neutropenia in cats with adrenal insufficiency produced experimentally. When cortico-adrenal extract was administered the granulocytes returned. The work of Kunde, Gree and Burns<sup>14</sup> with thyroidectomized rabbits, and the observations of Hubble<sup>15</sup> point out the influence of the endocrines on the blood cellular elements. Jaffe<sup>16</sup> considered a case of typical granulocytopenia to be attributable to adrenal insufficiency caused by a lymphadenomatous growth found involving this structure.

(5) *Radiation*: The stimulating and inhibitory dosage of roentgen ray and the effects of Thorium "X" upon leukocytes have, of course, been known to us for a long time. It is possible that this field may at times play a part in the causation of the disease wherein radiation has been handled by one not properly qualified. It is likely, however, that other contributory factors such as susceptible bone-marrow, endocrines and the like would play a part herein.

(6) *Bone-marrow Susceptibility*: Under this caption we find a very fruitful source of dissertation. First of all we are confronted with the fact that in this peculiar and delicate blood forming mechanism there may occur alterations of function or of structure that are responsible for the blood findings of various related diseases. In certain of these related diseases such as acute aplastic anemia, aleukemic leukemia, and aleukemic lymphadenosis, a lowering of total leukocytic counts and granulocytopenia frequently occur. It is also to be noted

that for such related diseases definite etiological factors have not been proven. It is of interest in considering these diseases, that the bone marrow alterations are not at all specific but are variable just as are those described for the Schultz syndrome. Discussions and observations upon the marrow in this disease have been presented by Jaffe<sup>17</sup>. The factors connected with marrow functioning have been well set forth in the work of Beck<sup>18</sup>. She considers in this disease the occurrence of lack of stimulating factor and failure of bone marrow activity. It is considered in this theory that only certain individuals may possess a bone-marrow that is susceptible to the various influences postulated.

#### TREATMENT

Numerous therapeutic measures have been advocated in this disease with varying and doubtful results. Whatever form of treatment is instituted, the primary aim always is to stimulate an inactive or hypofunctioning bone-marrow. A few of the more common agents employed are tabulated below:

- (1) Adenine sulphate.
- (2) Pentose nucleotid ("pentnucleotide," nucleotide K 96").
- (3) Dessicated yellow bone marrow, orally.
- (4) Leukocytic extract, intramuscularly.
- (5) Liver extract, fraction "G" of Cohn, intramuscularly.
- (6) Blood transfusion, used cautiously.
- (7) Intramuscular injections of whole blood, 30 cc. daily.
- (8) Roentgen ray therapy. Use with extreme caution. Light doses stimulate myeloblastic centers, large doses paralyze these centers which is definitely harmful. This type of therapy is best carried out only by an experienced roentgenologist.

#### SUMMARY

Co-called agranulocytic angina should be called the Schultz syndrome. It is a rather infrequent disease identified primarily by re-



duction of the total number of leukocytes and by a marked diminution or even an absence of the granulocytes. There seems but little doubt that it is to be regarded as a disease *sui generis*, but it is only the syndrome as a whole that identifies it, since the blood picture found may be duplicated at times by other blood dyscrasias. The associated clinical aspect permits of the recognition of this syndrome.

From an etiological viewpoint, if we are to discard a specific causal agent, which seems plausible, we are at once confronted with the ambiguity relating to the cause of various recognized blood dyscrasias, such as aplastic anemia, von Jaksch's or erythroblastic anemia, aleukemic lymphatic leukemia, aleukemic lymphadenosis or even pernicious anemia. In such a group we find diseases considered either as primary or secondary marrow disturbances and upon which much more extensive work has been done as to the etiology but with no definite results.

In the Schultz syndrome, there is as a rule a necrotizing or tissue destroying lesion in the oral cavity or elsewhere in the mucous membranes of the body. It has been argued that such lesions may be secondary to the lowered circulatory blood defense, rather than a site of primary invasion. The fact remains, however, that the locations of such lesions are fairly constant and that even if there has occurred an occasional instance in which the typical findings of the blood were seen prior to the occurrence of ulceration, there is always the possibility of other such lesions being present elsewhere, yet not discernible. It may be further argued that the heavy bacterial flora normal and variable in the throat renders this area a more likely site of injury from lessened resistance. We should, however, consider the flora of the large bowel and perhaps other areas as well. Again we must appreciate that now and then in other overwhelming infections such as peritonitis following gangrenous appendicitis that such a blood picture may be present. That bacteria and their products *per se* or

through tissue injury combinations, should be discarded as a potential cause, does not seem logical.

It is established that benzol or benzene is capable of producing marked lowering of the granulocytes. It is a fact that many of our more recent drugs as well as those long in use are connected with a benzene ring. It is notable, however, that many such drugs of almost universal and constant usage are not held responsible but rather those that also contain an amine. The carefully compiled histories of many of the reported cases of the disease reveal that drugs containing the benzene and amine "hook ups" have been previously administered. The animal experimentations, however, in regards to such particular types of drugs are probably no more convincing than those carried out with special methods along bacterial lines.

While allergy, endocrine disturbances and radiation are worthy of some consideration as provocative factors, they appear subsidiary to the drug and bacterial theories.

Certainly, bone marrow dysfunction or alterations must receive a conspicuous consideration either from a primary or secondary viewpoint. It seems in order at the present time to recognize, with reservations, however, a multiplicity of factors that may lead directly or indirectly to bone marrow dysfunctioning. It is not unlikely that this interesting and unusual syndrome presenting as it does marked blood dyscrasia, may continue of uncertain etiology, just as have many other diseases of the hematopoietic system already designated.

It is of great importance that we should be on the lookout for the occurrence of this disease, as the early recognition and therapy means the saving of lives. With the profession on the alert for the early diagnosis and with the improved measures of treatment available, many of such cases, heretofore, regarded as condemned to die, will be saved.

#### BIBLIOGRAPHY

1. Kracke, R. R. and F. P. Parker: The etiology of granulopenia (agranulocytosis), *J. Lab. and Clin. Med.*, 19:799, 1934.

2. Dennis, E. W.: Experimental granulopenia, due to bacterial toxins elaborated in vivo, *J. Exper. Med.*, 57:993, 1933.
3. Harris, W. H. and H. J. Schattenberg, Experimental studies in so-called agranulocytic angina, *Proc. Soc. Exper. Biol. and Med.*, 31:843, 1934.
4. Schattenberg, H. J., W. H. Harris: Experimental studies in so-called agranulocytic angina, *Proc. Soc. Exper. Biol. and Med.*, 31:847, 1934.
5. In Press. *Jour. Lab. and Clin. Med.*
6. Pirris, W. H. and O. M. Larimore: Production of experimental typhoid fever in guinea pigs with in vivo prepared toxic filtrate of *B. Typhosus*, *J. Exper. Med.*, 48:885, 1928.
7. Lanford, J. A.: Personal Communication.
8. Piney, A.: Diseases of the Blood, pp. 195, P. Blakiston's Son and Co., Philadelphia, 1932.
9. Selling, L.: A preliminary report of some cases of purpura haemorrhagica due to benzol poisoning, *Bul. Johns Hopkins Hospital*, 21:33, 1910.
10. Selling, L.: Benzol as a leucotoxin, *Johns Hopkins Hosp. Rept.*
11. Hektoen, L.: Effect of benzene on the production of antibodies *J. Infec. Dis.*, 19:69, 1916.
12. Madison, F. W. and T. L. Squier: Etiology of primary granulocytopenia (agranulocytic angina), *J. A. M. A.*, 102:75, 1934.
13. Britton, S. W. and E. L. Corey: Blood cellular changes in adrenal insufficiency and the effects of cortico-adrenal extract, *Am. J. Physiol.*, 102:699, 1932.
14. Kunde, M. M., Gree, F. M. and G. Burns: Blood changes in experimental hyper- and hypothyroidism (rabbit), *Am. J. Physiol.*, 99:469, 1932.
15. Hubble, D.: Endocrine System in Blood Disorders, *The Lancet*, 125, 113, 1933.
16. Jaffe, R. H.: Agranulocytic symptom-complex associated with Hodgkins lymphogranuloma, *Munchen. Med. Wechschr.*, 73:2012, 1926.
17. Jaffe, R. H.: Bone marrow in agranulocytosis (pernicious leukopenia), *Arch. Path.*, 16:611, 1933.
18. Beck, R. C.: Benign and malignant neutropenia. Present status of knowledge of this condition with report of four cases, *Arch. Int. Med.*, 52:239, 1933.

## THE RIGHT SIDE OF THE HEART IN PULMONARY DISEASES\*

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In discussing this subject, I am aware that there are changes which occur within the heart secondary to other lesions, that cause pathology in the right side of the heart, but I am limiting my remarks to right heart pathology secondary to pulmonary diseases alone.

Cardiovascular disease, which is secondary to pulmonary pathology, has received but little attention, not considering the heart in acute conditions like pneumonia, where the pathology

is of an acute nature, but those cases of long standing and subacute conditions that gradually increase their lung pathology and, secondarily, demand their toll from the heart. The involvement of the so-called lesser circulation, that is the right ventricle, pulmonary artery and vein, and their relation to lung disease, is little understood.

There are a number of diseases which affect the pulmonary circulation to a greater or less extent, with more or less involvement, varying all the way from slight dyspnea and cyanosis or exertion to the so called "Black Heart Ayerza", these patients either dying of their primary pulmonary disease or from their first or second cardiac failure.

In many of these patients you will find a hypertrophy of the right ventricle, also sclerotic changes in the larger vessels. But, as C. C. Mayer of Chicago states, this still remains an interesting study as to the physiological and pathological mechanism that brings it about.

The diseases of the lungs which are most commonly productive of right cardiac disease are: bronchial asthma, emphysema, chronic bronchitis, pulmonary tuberculosis of the fibroid type, bronchiectasis, silicosis, and pneumoconiosis, rarely new growth and pressure exerted by growths in mediastinum. We have all had experience with heart failure coming on in old chronic bronchitis and asthmatics. Just why this occurs is often very speculative, as to whether it is produced by some toxic substances liberated by the primary lung condition or purely from a mechanical effect.

The symptoms of heart failure vary as to whether the condition is acute, subacute, or progressive. Since going into all these conditions would make a lengthy paper, I will only consider, briefly, the progressive type, as this is the one which is most likely to catch us unawares. The symptoms vary from only a slight cyanosis and dyspnea with occasional attacks of palpitation to the so called black heart of Ayerza.

The symptoms of the primary lung condition can easily overshadow those of a beginning right heart failure, making it very difficult to

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distinguish the early cardiac involvement. But as time goes on the cyanosis increases, the dyspnea becomes pronounced, even present on very slight exertion, attacks of palpitation increase with appearance of edema around the ankles. As the heart pathology increases, of course, passive congestion of all the viscera takes place with the associated symptoms particular to the organ involved.

From a standpoint of diagnosis, the history of the patient's primary pulmonary pathology is important. The fact that a patient with a slow progressive pulmonary disease, that may or may not show periods of remission, associated with dyspnea on exertion, spells of palpitation and cyanosis of any degree, should put us immediately on our guard, and direct our attention to the heart.

At the beginning the physical signs may be very meager: the heart borders are hard to make out, the tones are weak and the murmurs are seldom heard. One sometimes hears a systolic murmur, however, over the ensiform cartilage. There is, at first, very little change in the rhythm, maybe only an occasional extrasystole, provided only the ventricle is involved. But if the auricle becomes involved also, you will have various sorts of arrhythmia. As the pathology advances, one can palpate the liver and spleen. Edema and ascites make their appearance. Roentgenograms will show in an advanced case right-sided hypertrophy. Electrocardiogram shows a pronounced right axis deviation which is of considerable importance according to Maher. Personally, I have had no experience with electrocardiograms.

One must differentiate right heart pathology and lung pathology from congenital heart disease, mitral stenosis, cyanosis due to drug poisoning and cyanosis due to polycythemia. The prognosis of right heart disease and lung pathology offers, as a rule, serious prognosis. The patient may recover compensation after several attacks of heart failure, but as the primary pathology in the lungs is still acting he will experience renewed attacks of heart failure until the heart becomes unable to recompensate.

#### TREATMENT

The most important factor in the treatment

is prophylactic measures. This refers, particularly, to bronchial asthma, and emphysema which is itself often a sequela of asthma. With the various tests that are used now to determine the sensibility of people to the various proteins and foods, etc., and with the methods of desensitizing these people, asthma, in a number of cases, is not only being prevented but is also being cured in some cases. Our modern methods of preventing tuberculosis have lessened the number of cases of tuberculosis, and the sanitary methods of mining and manufacturing have lessened the number of cases of other chronic inflammatory processes that cause sclerotic conditions in the lungs with their secondary heart involvement.

The general methods of treatment, which do not differ, particularly, from treatment of congestive heart failure from other causes, include general rest, by which I mean mental as well as physical, properly ventilated room, light bland diet, and proper elimination.

As to drugs, I would put opium at the top of the list. In the early failures digitalis acts well, but with subsequent decompensations the heart responds less and less to the drug, so that the drug does not relieve failure or minimize the patient's discomfort. Opium alone becomes the only anchor sheet for relief. Of course, in acute heart failure or in those in whom the symptoms come on suddenly, venesection has saved many lives. Atropine in large doses, combined with morphine, has also helped in some of my cases where sudden edema of the lungs developed but, if possible, I would resort to venesection first.

The treatment is very unsatisfactory. Although you may clear up a few attacks of heart failure in the patient with rest in bed, opium and digitalis, combined in some cases with repeated small intravenous injections of hypertonic dextrose solution in very acute case of heart failure, each subsequent attack is attended by greater difficulties and increasing complications so that relief becomes very difficult to obtain.

#### DISCUSSION

Dr. W. H. Frizell (Brookhaven): When Dr. Hart asked me to discuss this condition, the right



heart in pneumonia as announced by Dr. LeBaron. Dr. Hart then sent the copy of his paper to me telling me of the change of his subject. So often a man will have to change the subject to get in line with his own thought. Dr. Hart for many years was a member of the leading authorities on heart disease in Mississippi. He has studied this thing more than any one man, I might say, in our Association. He has been a student all the way along, and has had quite a bit of experience both in his own practice and that referred to him.

We all know that we have these conditions coming on in acute pneumatic conditions, and also in chronic conditions. He spoke of the use of digitalis, and that is about the only feature of it on which I shall have anything to say, with the possible exception of one other thing. I wish to admonish some of you that if you think you give digitalis in dram doses indiscriminately, in some of those cases you may have sincere cause for regret. You must remember that all the sons of Adam have idiosyncracies to something, and now and then we find a person who is peculiarly sensitive to digitalis. And I wish to impress on you further here that Bastedo in his work will admonish you that you should be wary in giving drugs in a pathological condition. Remember this, that the dose of a drug is not to be measured always when taken into or put into an animal where there is no pathological condition; that the dose in a given pathological condition can be given sometimes with much larger doses than you would in a non-pathological condition. Remember that you can not conscientiously judge the dose of medicine when put in a frog's leg or given to some animal, or given to a person. Give him a pathological condition and he will no doubt require more of the drug, yet there are conditions where we must not increase the dose. If we do we must do it cautiously. There is the condition of heart block. I might say, that I know I saved a man's life not many weeks ago, a man 55 who had had nicotine gangrene. He had been a sick man before that. This man had influenza, he had an acute influenza condition of the lungs, which you know is different from a lobar pneumonia. He had an abscess, but before that he had an edematous condition of the lung, he just couldn't live. Well, one dose, or 2 c.c. of digitalis shot into that man revived him enough where 5 gr. doses every four hours of caffeine sodium benzoate given to that man restored him after he had climbed the top of the mountain. Digitalis will bring them back, but be cautious if you do not know the patient. I will admit we must give heroic doses at times; do not give yourself any cause for regret.

Dr. Joe E. Green (Laurel): Dr. Hart was good enough to send me a copy of his paper. I do not know why the program committee put me down

to discuss it, I regard Hart as one of our best chest men. You probably do not recognize his ability. I think he has given us a paper that furnishes food for thought. When you come to dealing with the heart, I cannot do like Hart, separate the sides of the heart, I just have to take the whole heart. I have no discussion to make of this paper except this, that I want to thank you for having it. I think we are on the heart just like other things, we still do not know anything too much about it. Not a year ago I happened to be sick myself, and they said I had only 24 hours to live, I think they were telling the truth, but there was nothing to worry about, you have to live until you die any way, and they gave it out all through the country, through weddings and things of that sort, and my doctor worked on me for weeks, and he finally said "there isn't a darn thing the matter with your heart that I can find." All I can say is when it goes bad on you lie down and stay there until it gets well, and everything is fine.

Dr. Hart (closing): I want to thank the gentlemen for discussing the paper. I sent a copy of my paper to Dr. Frizell at Brookhaven and the other I evidently sent to the wrong man!

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## LIPIODOL AND SOME OF ITS USES IN SURGERY\*

OSCAR J. BIENVENU, M. D.  
OPELOUSAS, LA.

Lipiodol, as the name implies, is a combination of iodine and oil. Since this paper deals specifically with the use of lipiodol (Lafaye), it is fitting that I should mention that there are many other iodized oils on the market. I do not wish to discredit any of them as I have not given them a trial in the treatment of the conditions which I will mention later.

To be more explicit, lipiodol (Lafaye) is poppy oil containing 40 per cent iodine. It is amber in color and is non-irritant to the skin, mucous membranes and deeper tissues. It is opaque to the roentgen ray and it can be injected into the body cavities without causing pain or discomfort. It has been proven that months and in some cases even years pass, before all the iodine has been

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\*Read before the Louisiana State Medical Society, New Orleans, April 29-May 1, 1935.



absorbed, which accounts for no cases of iodism following its use. Lipiodol is not only non-irritating but actually relieves pain when injected into the deeper tissues, around nerve trunks and nerve endings. It is an antiseptic and possesses powerful anti-bacterial properties.

Poppy oil has long been known. It was described by Hippocrates some 400 years before the birth of Christ. In those days as now, poppy oil was not supposed to have narcotic properties, even though it is a part of *papaver somniferum* or opium poppy. Yet we do know that this oil combined with 40 per cent iodine is non-irritant and not painful when injected subcutaneously or into the deeper tissues. Smaller quantities of iodine in combination with other oils have proven to be irritating to mucous membranes or when injected into the tissues.

Iodine had its beginning in 1812 when discovered by Courtois, a Parisian manufacturer of soda. It was first employed as a medicine in 1819 by Coindet of Geneva. Since that time it has been found that iodine will penetrate body tissues. Iodine has been demonstrated in the urine of patients whose skin had been painted with the tincture. In the treatment of syphilis, especially the tertiary stage, the importance of iodine has long been known. Due to its liquifying qualities iodine has been used in pericarditis and bronchitis. Iodine is a local irritant and a germicide. As an antiseptic Goebel in 1906 found that a 1-1000 solution killed staphylococci after one minute exposure. Hailer noted that the same organisms were killed by a 1-8000 solution after two minutes. In 1911 Turner and Catto found that a 3 per cent solution of iodine would sterilize the skin surface when applied. Booe in 1911 stated that 50 per cent of the tincture (representing 3 per cent of iodine) was required for complete sterilization. Iodine was recommended by Woodbury in 1912 to sterilize the surgeons hands, instruments, sutures and dressings. Painting of wounds and skin surfaces has long been practiced for the pur-

pose of either preventing infection or to destroy any pus producing organisms already present. Going over this little history one can easily see that a combination of oil (poppy) and as much as 40 per cent iodine makes an ideal preparation for treating infections and especially when it can be injected without causing pain.

Iodized oils have been known and used for many years. In a paper by Dr. Jacques Forestier, delivered before the "Federation des Sociétés des sciences médicales d'Algérie" he states "that in 1848 Marchal (Calvi), Personne (Paris) and Deschamps (Avallon), succeeded in combining iodine with vegetable oils, but it was not until 1901 that Guerbet and Lafaye presented the first iodized oil known as Lipiodol."

In 1908 Prof. Sicard first noted the opacity produced by lipiodol when exposed to the roentgen ray. Only in 1921 did he and Dr. Forestier perfect this new method for radiologic use. While working in this field, it was noted that certain patients who had been injected with lipiodol began to show marked physical improvement. That was the beginning of much experimentation with iodized oil as a therapeutic agent.

As such, lipiodol has been successfully used in the treatment of some cases of bronchial asthma. It is being used in the treatment of acute and chronic bronchitis. As an injection very pleasing results have been had in the treatment of sciatica, cervicobrachial and intercostal neuritis, chronic arthritis. In painful amputation stumps the injection of lipiodol, directly into the painful area, has been most gratifying in 80 per cent of these cases.

I wish to bring to your attention the cases in which I have used lipiodol therapeutically and to save time, will make this as briefly as possible.

#### CASE REPORT

Case 1. M. H. In December, 1927 this patient suffered an attack of pneumonia which was followed by empyema. In January, 1928 a thoracotomy was performed and through drainage tubes the cavity was irrigated 2 or 3 times daily with

Carrel-Dakin solution. After several months the sinus was allowed to close but later had to be reopened and irrigated. This continued until November, 1928, at which time the cavity was not yet sterile but having read an article about lipiodol I decided to give it a trial. I injected 8 ounces into the cavity and two days later removed the tubes. The sinus healed promptly, all symptoms rapidly disappeared, the patient began to gain weight and strength. Today the patient is in perfect health.

Case 2. L. R. 1929. This patient gave a history of having had pneumonia 3 years before I saw him. A thoracotomy had been performed at that time, the sinus had been allowed to close several times but always had to be reopened. After practically three years of drainage, I injected 3 ounces of lipiodol, and removed the tubes two days later. The sinus closed. Immediate improvement was noted and at this time the patient is apparently in perfect health.

Case 3. Child kicked on the forehead by a mule. A piece of the frontal bone about  $1\frac{1}{2}$  inch long and  $\frac{1}{2}$  inch wide was removed. The frontal lobe of the brain was exposed. Infection followed. After drainage for 3 weeks, lipiodol was injected. The wound healed and recovery promptly followed.

Case 4. H. B. Abscess or empyema of the antrum of Highmore following tooth extraction. This case had, for two weeks been receiving thorough and frequent irrigations with absolutely no relief. I injected lipiodol by perforating the cavity through the nose. Pain was relieved almost instantly. Within 24 hours, the swelling of the cheek was markedly diminished. There was no tenderness, no fever, no swelling of the cheek, no pain and no foul odor in 30 hours after injection. There has been no recurrence.

Case 5. H. D. 22 years old. Osteomyelitis of the shaft of the femur of four years duration, with a history of three operations. There was a sinus at the junction of the middle and lower third of the thigh on the anterior surface, lipiodol was injected through a rubber catheter. Pain was relieved within 48 hours. At the end of two weeks, lipiodol was again injected. One week later, there was no pain, no swelling, no tenderness and the sinus closed.

Case 6. J. D. Osteomyelitis of the tibia in a child 10 years of age, of 2 years duration, giving a history of five curettages. Lipiodol was injected through a sinus near the head of the tibia. Pain, swelling, tenderness disappeared within one week. The sinus closed. There was no recurrence in 3 years.

Case 7. Mrs. C. I had been informed of this case of chronic osteomyelitis of the shaft of the femur in which lipiodol was injected with ap-

parently no good results. After questioning the doctor in charge of the case, I learned that there was a sinus which opened in the lower third of the thigh just above the popliteal space, and that the patient was not put to bed after injection. It is only reasonable to believe that this was not a fair test of the use of lipiodol. This case should have been injected in bed and instructed to remain in a prone position just as long as possible, or some attempt should have been made to close the sinus after injection. It is absolutely necessary for the iodized oil to remain in contact with the infected tissue to affect a cure.

#### CONCLUSIONS

1. Lipiodol will prevent infection and does not produce abscess formation when injected, it being self-sterile.
2. It will retard further growth of infecting organisms already present.
3. It will kill micro-organisms which have caused infection.
4. The iodine content of the preparation does penetrate body tissue.
5. Lipiodol does not cause pain or irritation when applied to or injected into the body tissues.
6. It requires months and even years for the iodine to be completely absorbed.
7. There is a sufficiently powerful amount of iodine in lipiodol which, through its oily combination, remains in contact with infecting organisms long enough to cause their destruction.

#### DISCUSSION

Dr. William P. Bradburn, (New Orleans): I have been particularly interested in the report of the last few cases, particularly those of osteomyelitis. Personally, I have never used lipiodol in osteomyelitis, as he reported. I have used it in chest surgery following thoracotomy, with excellent results. The same has been obtained, however, by me, in the use of any of the other disinfecting agents following thoracotomy.

I have never used lipiodol in the quantities that have been suggested by the essayist in some cases. Eight ounces is a very considerable quantity, and there is no fear of using it, but sometimes the expense to the patient has to be considered.

As I said, I have not used lipiodol in cases of osteomyelitis, having used mixed paste instead, and I have gotten some good results. However, I will take great pleasure in trying it in a case of

chronic osteomyelitis I now have, after twenty years of a quiet condition, and I will be glad to tell him just exactly what I think of it. For the present we are very interested in hearing the reports, and we should at least give it a trial in some of our questionable problems.

As to the diagnostic side, we are familiar with that. So far as his paper limiting it to the therapeutic side, we agree with that, and he mentions the cases in treatment of the chest, and I can add a case of treatment of the liver, in which I used it. I would be very pleased in hearing also of further work in the osteomyelitis group.

Dr. Oscar J. Bienvenu, (Opelousas): I do not think there is anything more that I can add except that I certainly would appreciate hearing from Dr. Bradburn after he uses it in osteomyelitis. It has been successful, extremely so.

## THE BACTERIOLOGY OF AND EXPERIMENTAL WORK IN FOCAL INFECTIONS\*

GEORGE F. FASTING, M. D.†

NEW ORLEANS

The term "focal infection" does not lend itself to a ready and precise definition. As a pathological term it may be conceived as describing a small circumscribed infected tissue area, harboring any one of the many pathogenic germs, irrespective of their type, which during their life processes are able to exert deleterious action upon the invaded host. The term does not appear to have found favor among pathologists, but is employed somewhat extensively among clinicians and dentists in the United States.

As commonly used "focal infection" suggests the existence of a possible relationship between a disease manifestation in one part of an organism to a small circumscribed area infected with bacteria in a remote part of the same organism. Such infections need not and very often do not give evidence of a pathologic state in the patient nor do they reveal such to the examining physician.

\*Read before the Orleans Parish Medical Society March 25, 1935

†From the Departments of Pathology and Bacteriology of School of Medicine, Louisiana State University Medical Center and the Charity Hospital of Louisiana at New Orleans.

The clinical recognition of this possible mechanism in disease production, and the beneficial results that so frequently follow the removal of suspected tissues, such as tonsils and teeth, have led to rather extensive application of extirpational procedures in medical and dental practice. This is surprising when contrasted with the insignificant attention given the topic in textbooks of clinical medicine, pathology and bacteriology.

The bacteriological and pathological research necessary to elucidate the phenomena associated with foci of infection, has not had the attention of many workers, although in most pathological laboratories, isolation of bacteria from "focal infection" tissues is constantly carried on. Such proper research is beset with difficulties inherent in all biological work. Animals susceptible to various organisms pathogenic for man are relatively few. The activities and reactions of bacteria found in "focal infection" studies and seemingly responsible for chronic slowly debilitating states are rarely met with spontaneously in animals. Certain tissues, like the tonsils and nasopharynx, present on their surfaces a variable yet supposedly "normal" bacterial flora which in most individuals give rise to no disturbances. Still, similar organisms on the surface of these same structures are in certain individuals held responsible for disease. Explanations for this discrepancy are sometimes blatantly offered but the laws governing acquisition of invasive property or the development of varied specific tissue affinities are certainly not understood.

As regards the biochemistry of bacterial poisons and their pharmacodynamic actions—even such elaborated by rather stable bacterial species—next to nothing is known. Still, very suggestive work of a few investigators along these lines several years ago has not as yet received sufficient recognition.<sup>1, 2, 3, 4</sup>

Rosenow<sup>5</sup> and his followers<sup>6, 7</sup> have made interesting contributions to our knowledge of focal infection by their studies of streptococci of the non-hemolytic and viridans types. Fortunate circumstances in the finding of suitable experimental animals, emphasis on special bacteriologic technic and the cooperation of sev-



eral medical specialists have made their results very significant. However, it is distinctly erroneous to attribute to Rosenow and his followers the idea that streptococci are causal agents in all "focal infections".

It is unfortunate that suitable procedures have not been developed to help clarify the role of staphylococci, *B. coli*, *Neisseria catarrhalis* and the fuso-spirochetal group, for clinical results lend strong suspicion of their involvement in the phenomena of "elective localization".

The clinician interested in undertaking similar work would do well to note in the preface of Dr. R. L. Haden's book, *Dental Infection and Systemic Disease*, the large and varied staffs recommended as necessary properly to carry on such investigations.

The structures that commonly come to mind in "focal infection" are: the nasopharynx, the accessory nasal sinuses, the tonsils, the teeth, the gallbladder, the appendix, the prostate, the uterine cervix and occasionally the colon. Many of these structures have a natural mixed surface flora, with undoubted frequent invasion of the tissue proper. The effect of symbiotic actions of micro-organisms on these structures is little known, and there is little experimental work to explain their action in the human body.

Bacteriological studies indicates that the most frequent, responsible organisms in "focal Infection" are the streptococci, the staphylococci and the members of the colon group. In the oral cavity members of the fuso-spirochetal group are undoubtedly frequently incriminated even though we do not know much regarding their systemic effects. Partial tension of oxygen in the media used, and the ability of the experimental animal to suppress many co-existing micro-organisms that may be present in a removed focus of infection, are the prominent factors responsible for success in this type of work. The customary bacteriological procedures of extensive isolations by plate methods, have ignored partial tension of oxygen and relative ease of dissociation of most bacterial forms.

Corroboration of "elective localization" of

streptococci in the United States is greater than is generally supposed. Since 1930 similar work has been undertaken and results verified by European investigators: Luzena<sup>8</sup> in Rome on cholecystitis and iritis; Bernhardt<sup>9</sup> in Berlin on cholecystitis and arthritis; Buttiax and Sevin<sup>10</sup> in Lille, France, on ulcerative colitis; and Rambaugh<sup>11</sup> in Paris on psychopathic patients.

Clinical cases often present suggestive evidence of foci that are inadvisable to remove, i. e., the prostate and the gall-bladder; in such cases bacteriological statistics may help in surmising the bacterial flora in such foci, but medical practice has to fall back on "constitutional factors of resistance", and a therapy of the "trial and error" kind, for want of better knowledge of immunity and immunity reactions.

In the course of the author's study and practice it has been possible to verify the peculiar "elective localization" in the rabbit with cultures obtained from a variety of foci in man. The following is an illustrative case:

Case 1—White female, aged 26 years, unmarried. *Complaints*—Chronic nasal sinusitis for seven years, neuritis of left arm for two years. Vomiting immediately after breakfast and supper for the last six months. *Previous History*:—Tonsillectomy and scarlatina in childhood. *Pathology*:—Hyperplasia of nasal mucous membrane; periapical infection of three devitalized teeth and one suspicious carious tooth.

On January 4, 1935, two teeth were removed, cultured by Rosenow's procedure and the growth (non-hemolytic streptococcus) injected intravenously into four rabbits. One animal died in forty-eight hours; it presented a bilateral pneumonitis. The others were chloroformed seventy-two hours after injection. One of these animals presented a hemorrhagic lesions of the right tibial nerve, in addition to two purulent joints. A second showed a tricuspid vegetation. The extractions were followed in the patient by exacerbation of pain in the left arm, and a similar neuritic pain in the right arm.

On January 25, 1935, two other devitalized molars were removed, cultured and suspension of the recovered non-hemolytic streptococcus injected intravenously into four rabbits. Two of the rabbits died within twenty-four hours with evidence of sepsis, and gross hemorrhagic lesions in three sciatic and four tibial nerves. One rabbit was chloroformed thirty-six hours after injection, and showed



hemorrhage in one tibial nerve. The fourth rabbit developed spasticity of the forelegs twenty-four hours after injection. On the fourth day recovery had taken place and no gross lesion could be demonstrated at autopsy.

One month later subcultures from three rabbits that had revealed the extensive nerve involvement were injected intravenously into four rabbits. Three animals lived eleven days, showing no symptomatic disturbances nor pathologic lesions at autopsy. The fourth rabbit died after forty-eight hours with extensive liver degeneration.

#### BIBLIOGRAPHY

1. Koessler, K. K., Hanke, M. T.: Studies on proteinogenous amines. *J. Biol. Chem.*, 16:21, 1924.
2. Koessler, K. K., Hanke, M. T., and Sheppard M. S.: Production of histamine, tyramine, bronchospastic and arteriospastic substances in blood broth by pure cultures of microorganisms. *J. Infect. Dis.*, 43:363-377, 1928.
3. Koessler, K. K., Lewis, J. H., and Walker, J. A.: Pharmacodynamic actions of bacterial poisons. *Arch. Int. Med.*, 39:163-213, 1927.
4. Johnston, A. R.: The toxic effects of amines. *J. Infect. Dis.*, 42:473-484, 1928.
5. Rosenow, E. C.: Focal infection and elective localization of streptococci in the causation of disease. *Acta Rheumatologica*, Number 3.
6. Cook, T. J.: Focal production of ulcerative colitis. *J. Am. Dent. Assn.*, 18:2290-2301, 1931.
7. Rosenow, E. C., and Jensen, L. B.: Elective localization and cataphoretic potential of streptococci. *Proc. Soc. Exper. Biol. and Med.*, 37:442-444, 1930.
8. Lusena, M.: Studi ed esperienze Sulle Infesioni Focali. *Policlinico (Rome)* 40, 1933.
9. Bernhardt, H.: Zur Frage der Fokalinfektion und der "elektiven Lokalisation". *Zeit-Klin. Med.*, 117:159-173, 1931.
10. Butteaux and Sevin: Sur l'Étiologie des Colites Ulcéreuses. *Ann. Inst. Past.*, 47:173, 1931.
11. Gebier-Ramhaugh, Q.: Rôle de l'infection focale dans certaines Psychoses. *Press Med. (Paris)*, 51, Oct. 10th, 1931.

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## PREVENTION OF MALARIA

It seems ridiculous to keep harping on the same subject but certainly there seems to be a need to do this when it is found that malaria is as prevalent as it is in Louisiana at the present time. In the last quarterly bulletin of the Louisiana State Board of Health, Dr. O'Hara reported that for the second quarter of 1935 there were listed 360 cases of malaria, more

than any other disease except syphilis. During the summer and fall months malaria was evidently more prevalent than it was in the spring. Thus, in August in one week there were reported 228 cases of this disease. The next week 223 were listed. The last week of August there were 265 cases. September the incidence of the disease stayed persistently high. The figures published in this number of the Journal showed that malaria is leading all of the reportable diseases. While there are not as many cases as reported in August, nevertheless this is the most frequently reported of all diseases. Physicians have seen these cases in large numbers in their private practice and in Charity Hospital there are also patients with malaria in large numbers.

It is very possible that innumerable cases are not being reported; they are not being seen as they resort to self-medication. This great prevalence of malaria is deplorable as there is no reason why there should not be adequate control. If the patients are treated properly they should not for long be foci for the dissemination to the plasmodia. Extensive efforts of malaria control are prohibitive in cost but if each and every physician insists upon the patient following out the standard treatment of the disease, there should and will be a very material diminution in the number of people invalidated by this serious and some times fatal condition.

## A MEETING OF IMPORTANCE

The National Tuberculosis Association will hold its annual meeting in New Orleans the week of April 20th immediately following the meeting of the Louisiana State Medical Association in Lake Charles. A preliminary open session will be held Wednesday night, and the next morning the regular official program will commence. The annual meeting of this great national organization will be well worth while attending. It promises to be one of their really best meetings.

The general plan of the meeting provides for four sections, two of which are clinical and pathological, and the other two are sociologic

and administrative. The medical man will be interested in the first two sections. They have alternate sessions so that their meetings do not conflict. For these sectional meetings outstanding clinicians in the field of phthisiology will present results of their studies and observations of patients and of laboratory procedures which will enlighten and instruct even those who keep well abreast of what is being done in the field of tuberculosis and lung disease. In addition to the daily sessions in the evening there are held x-ray conferences in which plates are demonstrated to small groups and where questionable or interesting films may be brought by physicians for discussion and interpretation. The organization also has general evening meetings in which some of the broader aspects of tuberculosis are discussed. Thus it is planned to have a symposium on tuberculosis as a racial and national problem at one of the evening sessions. In addition to the scientific program there will also be special arrangements for social activities for those in attendance as well as those they bring with them.

Any and every physician is cordially invited to attend this meeting. There is no registration fee and there is no requirement of membership in the organization to register. It is hoped that there will be on the program a few papers from Louisiana doctors and from the physicians of the South. Any physician wishing to appear on the program may address Dr. W. B. Sopher, New Haven, Conn., who has charge of the clinical portion of the program, or Dr. C. A. Doan, Ohio State University, Columbus, Ohio, who is in charge of the program of the pathologic section.

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#### THE EFFECTS OF CHOLECYSTECTOMY

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Cholecystectomy, when stones are present in the gallbladder and sometimes when the gallbladder is the seat of rather extensive non-calculus inflammatory changes, is an extraordinarily successful operation. In about 85 per cent of cases in which stones are present the results are all that a surgeon hopes for and anticipates. The results in chronic inflammatory

disease are not, however, as fortunate. Weir and Snell\* have published an interesting paper which attempts successfully to explain the symptoms that sometimes remain after a gallbladder has been excised. Aside from those instances that are conditioned upon faulty diagnosis there remains a group of cases which may be explained by residues of cholecystic disease continuing to disturb the patient; strictures of the common bile duct may develop and in a certain small group there occurs post-cholecystectomy colic which is dependent upon a variety of organic causes and also to visceromotor disturbances.

Fundamentally and basically the persistence of symptoms after removal of the gallbladder would be obviated in the great percentage of cases if the diagnostician selects carefully the patient who is to be operated upon. Merely because a patient has had jaundice is no reason why he should be submitted to a laparotomy, indefinite dyspepsia is no criterion for gallbladder surgery, and the accidental finding of a gallbladder which fails to visualize or which contains stones is again a poor reason for suggesting surgery. The complications that occur after any abdominal operation are contingencies which must be faced when operation is decided upon and the special complications must be given due thought. Residues of cholecystic disease may occur in a few individuals because cholecystic disease itself is usually associated with hepatic disease or even with chronic pancreatitis. These hepatic lesions after gallbladder removal in the majority of instances, of course become inactive but as the authors say, resolution to complete healing can hardly be expected invariably. Stricture of the common bile duct is rare, nevertheless it does happen and may result in post-operative syndrome of jaundice without pain, attacks of colic, persistent fistula, and for months after operation more or less periodic attacks of jaundice. Ultimately the unfortunate individual who has this complication becomes permanently jaundiced and severe injury to the liver takes place. Consequently if the symptoms sketched above appear, reconstructive operations are indicated.

The patients who have colic after the re-

moval of the gallbladder afford considerable worry to the surgeon and to the internist. Their treatment is difficult and the result is problematical. The colic may be due to incomplete cholecystectomy, to stones in the common duct or to cholangitis, to stricture or it may be that if operation is repeated there is found no obvious gross disease of the liver or bile duct. The explanation of colic for which there cannot be discovered any exciting pathologic cause may be assumed to be due to certain factors, according to certain well substantiated theories advanced by Ivy and his co-workers. It is assumed that there is spasm of the sphincter of Oddi as a result of abnormal sympathetic or parasympathetic innervation. This over-distends the common duct and causes pain. Likewise it will produce nausea and vomiting or other less clear-cut digestive expressions. The treatment of these patients is difficult. They usually are neurotic and often

opiates are necessary to alleviate the suffering. The authors suggest that if transduodenal biliary drainage, a persistent employment of antispasmodics, sedatives and alkalis, together with sodium phosphate in the morning, is not sufficient to control the symptoms that paravertebral nerve block or even section of the splanchnic nerves, which has been rarely used, may ultimately have to be practiced. Under any consideration biliary dyskinesia, the term applied to the syndrome of biliary colic not due to organic disease, is a disturbing and discomforting development after cholecystectomy. It may be present before operation, hence the value of very complete study of the patient prior to submitting him to radical gallbladder surgery.

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\*Weir, J. F., and Snell, A. M.: Symptoms That Persist after Cholecystectomy: Their Nature and Probable Significance, *Jour. Am. Med. Assn.*, 105:1093, 1935.

## HOSPITAL STAFF TRANSACTIONS

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### TOURO INFIRMARY

The regular monthly meeting of the Touro Infirmary Staff was held Wednesday, October 9, 1935 at 8 P. M. In the absence of the Chairman, Dr. Henry Blum, Dr. Walter Levy presided.

Instituting an innovation in the staff meetings, Dr. John Lanford conducted a clinical pathological conference for one hour. Two cases were so presented. One, a case of cholelithiasis in a 77 year old male and the other a severe streptococcal laryngitis and bronchial pneumonia in a 1 year old infant. Clinical aspects of these cases were presented and discussed, following which the pathological specimens were shown.

As next order of business, Dr. Levy presented the new Superintendent, Dr. A. J. Hockett. Dr. Hockett spoke briefly on the matter of completing case records and means of communication with the administration.

The record of an unusual case of lymphatic leukemia was presented by Dr. B. R. Heninger. This was discussed by Drs. Lanford, Jos. Cohen, Lemann, Eustis, Kearney, Tietelbaum and Matas.

Dr. Sydney Jacobs showed the staff a patient with an unusual type and degree of obesity. Drs. Lemann, Matas and Holbrook discussed this case.

Willard R. Wirth M. D.

### JACKSON INFIRMARY STAFF MEETING

The first staff meeting of the Jackson Infirmary,

since the summer suspension of meetings, was held September 24, 1935, with a buffet supper being served before the regular meeting began. Thirty-three members and guests were present and enjoyed the supper.

1. Case report by Dr. Rehfeldt. A patient who had an onset of headaches which had increased in severity, frequency and duration over a long period of time. Roentgenograms showed the unusual finding of nine cervical vertebrae, the first one being within the skull.

2. Dr. Wilson discussed heart disease during pregnancy. It has been shown by recent work by men in the New England States, where there are a great deal more heart disorders than are found in this section of the country, that if a very rigid line of care is followed with these patients the mortality can be greatly reduced as shown by the statistics of 18 per cent mortality against 4 per cent mortality when the proper care was observed.

3. Dr. Barksdale, after the assembly had bowed its heads in memory of its departed member, Dr. Julius Crisler, said a few words about the character, personality and ability of this remarkable man.

4. Election of Officers: Chief of staff, Dr. Ewing Gordin; Secretary, Dr. George Owen.

Drs. Berman, Magee, Flint and Applewhite were present as guests. Dr. McCarthy offered their



names as members of the staff. These will be referred to the membership committee and are to be passed on at the next meeting by the staff. Dr. Edward Holmes of Winona was also a guest.

Drs. Womack, Adkins and Barksdale were named as a committee to draw up appropriate resolutions for the staff in regard to the death of Dr. Julius Crisler.

The newly elected Chief of Staff took the chair and entertained a motion for adjournment.

Harvey F. Garrison, Jr.

#### MISSISSIPPI BAPTIST HOSPITAL STAFF MEETING

The regular meeting was held September 17, 1935.

Dr. Van Dyke Hagaman reported a case of toxic amblyopia due to tobacco, which recovered after treatment with intravenous nitroscleran.

Dr. Hardie Hays discussed a case of fever of undetermined origin.

These case reports were very interesting and a general discussion of the cases made them even more valuable to the staff.

Dr. Frank Hagaman presented a study of statistics on the experiences of the hospital staff in dealing with peritonitis as a complication of appendicitis. This study showed that the results at this hospital compared very favorably with the results obtained in hospitals in other sections of the country.

Drs. George Owen, Frank Werkheiser and Banks were elected to full membership of the staff.

Harvey F. Garrison, Jr.

#### VICKSBURG SANITARIUM STAFF MEETING

A regular monthly meeting of the staff of the Vicksburg Sanitarium was held October 10 with twelve members of the staff and three guests present. After a supper served at 6:30 P. M., the program included the following:

Reports from the records department and analyses of the work of the hospital.

Report of vital statistics from the Warren County Health Department, Dr. F. Michael Smith, director.

##### Special Case Reports:

1. Carcinoma of the Cervix Uteri.—Dr. G. M. Street.

Discussed by Drs. L. J. Clark, J. A. K. Birchett, Jr., and F. M. Smith.

2. Carcinoma of the Descending Colon—Resection.—Dr. J. A. K. Birchett, Jr.

Discussed by Dr. G. C. Jarratt.

3. Tularemia.—Dr. G. C. Jarratt

Discussed by Drs. W. E. Johnston, G. M. Street, L. J. Clark, J. A. K. Birchett, Jr., and L. S. Lippincott.

Special Report: The Recent Meeting of the Amer-

ican Academy of Ophthalmology and Oto-Laryngology at Cincinnati.—Dr. C. J. Edwards.

Demonstration of selected radiographic studies: osteomyelitis of finger (2 cases); depressed fracture of skull (2 cases); aortic dilatation.

Three minute reports of the literature of the month:

Dr. L. S. Lippincott.—Deaths Following Fever Therapy.

Dr. J. A. K. Birchett, Jr.—New Technic of Closure of Fecal Fistulae.

Dr. L. J. Clark.—Relation of Diverticulitis and Carcinoma.

Dr. W. E. Johnston.—Volkmann's Ischemic Paralysis.

The next meeting of the staff will be held Monday, November 11.

Leon S. Lippincott  
Secretary

#### VICKSBURG SANITARIUM STAFF MEETING

October 10, 1935

Abstract—Carcinoma of Descending Colon—Resection—Dr. J. A. K. Birchett, Jr.

White male, aged 70 years; admitted to Vicksburg Sanitarium August 27, 1935. Present illness.—About three or four months ago noticed a lump in upper abdomen, not painful; did not feel sick; no trouble with bowels but was only slightly constipated which he had been all of life. Did not have intermittent diarrhea and constipation; no blood in stools; felt very well but thought he tired more readily the last two or three months than formerly but had been at work regularly. Past History.—No serious illness; had influenza in 1918. No history of any cardio-vascular, respiratory or digestive disturbance. Suffered with nocturia and occasionally had slight urinary frequency with burning from prostatic irritation. Did not use alcohol or tobacco in any form. Family History.—No tuberculosis; no cancer. Physical Examination.—Well developed and nourished white male. Although 70 years of age appeared to be 10 years younger. Not acutely ill. Temperature 98°F.; pulse 88; respiration 18; blood pressure 170/80. General examination revealed heart normal size, pulse regular, some arteriosclerosis, lungs normal. Palpable mass size of orange in left umbilical region of abdomen freely movable, not especially painful. Either a mass in descending colon or left kidney, probably not spleen. Prostate enlarged (2-plus), small amount residual urine, not infected. Had right inguinal hernia reducible and retainable by truss. Rectum, no mass palpable, no hemorrhoids. Clinical Laboratory.—Blood Wassermann, Kline and Young, Kahn, and Eagle flocculation tests, negative. Blood count: hemoglobin 97 per cent; color index 0.94, erythrocytes 5,230,000; reticulocytes 0.3 per cent, leukocytes 7,600, differen-

tial leukocyte count, small lymphocytes 14 per cent, large lymphocytes 5 per cent, monocytes 6 per cent, polymorph neutrophils, mature 43 per cent, band forms 27 per cent, eosinophils, 5 per cent; no malaria found. Blood chemistry; urea nitrogen 14.48 milligrams, creatinin 1.7 milligrams, sugar 95 milligrams. Urine: slightly cloudy, slightly acid, slightest possible trace albumin; few pus cells (1 plus); many fresh blood cells.

Roentgen-Ray Laboratory—Rectum and sigmoid colon fill well. There is a marked filling defect in distal descending colon with tendency to obstruction. On account of intense pain from barium eaema no barium was forced by this area which is opposite a mass in abdomen. Impression—Carcinoma descending colon.

Impression.—A tentative diagnosis of growth in descending colon was made and patient was ordered in for roentgen-ray and fluoroscopic study of gastrointestinal tract. This revealed a constricting deformity; an enema of opaque media confirmed the findings of opaque media given by mouth. After this finding it was not thought necessary to do cystoscopic study and injection of opaque media into the left renal pelvis for growth in that organ.

Procedure. The general condition of patient was such that exploratory operation could be done and if the mass was operable this would be attempted. The patient was quite willing to have surgical relief and presented himself for admission to Sanitarium August 29. After admission he was placed on non-residue diet as suggested by Rankin, lower bowel was kept clean by daily irrigation of saline. Petrol oil was given orally three times day. Blood chemistry taken was normal, roentgenogram of chest did not show any cardiac dilatation, aneurysm or abnormal lung pathology. September 4 we felt that his condition was satisfactory for surgical exploration of abdomen. The morning of operation calcium, gr. X, was given in vein to promote coagulation. After preliminary hypodermic of morphine, gr. 1/6, and atropine, gr. 1/150, and under ether anaesthesia abdomen was opened by a long left pararectus incision, the middle of which was placed over the center of the mass. The abdomen was opened without difficulty and was unusually free from adhesions, no evidence of glands in mesentery and liver showed no evidence of metastases. The mass was size of a large orange and was situated in the lower descending colon. It was firmly attached to the parietal peritoneum in the region of the iliac crest and at first was rather fixed but after division of the peritoneum by circular incision around the mass it was easily lifted into the wound. The descending colon was mobilized by division of peritoneal reflection along the lateral abdominal wall and the peritoneal bands and fasciculae were divided as far

up as the splenic flexure allowing the colon to be turned well inward and away from the lumbar region. All vessels were clamped and ligated as they were isolated. The middle and left colic vessels were carefully safeguarded by keeping close to the freed loop of colon. After the loop of colon containing the mass was sufficiently freed to be brought into the wound of the mesentery opposite the mass, it was divided and all vessels carefully ligated being careful not to include the blood supply of the upper or lower limb of the proposed colostomy. The two limbs of the loop below the mass were then approximated at their antimesenteric border by continuous cat gut sutures and the loop of colon containing the mass was exteriorized and after the raw lumbar area was peritonealized and the opening in the mesentery was closed the abdominal wound was closed about the mass. Clamps were then placed across the normal colon above and below the mass.

Segment of colon containing mass was removed with cautery this leaving a double barrelled colostomy, the clamps to be left in for 72 hours or until the upper limb became distended, the colostomy later to be closed if it did not close itself after crushing the spur between the colostomy after the method of Rankin. Penrose drains were placed in lower end of wound to take care of serious drainage.

Progress.—Reacted from surgery without any severe reaction, pulse rate not increased at any time over 110, drainage from wound free serosanguineous drainage. Glucose, 1,000 cc., in vein daily; necessary to catheterize several times because of bladder irritation and this was followed by prostatic irritation. Urotropin given three times daily with relief.

On third postoperative day drainage was removed, there was some discomfort in upper abdomen due to distention of proximal loop and clamp was removed with passage of large amount of gas and some fecal matter; that night had several large evacuations through colostomy.

On fifth postoperative day lower clamp sloughed away leaving viable healthy looking double barrelled colostomy. This was irrigated daily with saline to keep bowel open and clean. Condition improved steadily, taking selected diet; petroleum given to promote control of bowel movement; on several occasions they became too free and oil was discontinued.

On thirteenth postoperative day all abdominal sutures were removed and clamp was placed across spur between the two colostomy openings to crush the intervening tissue deflecting the fecal stream into the lower segment of colon. After three days this clamp cut through and as stoma was not quite large enough another area was clamped further

down on the spur. This cut through in 48 hours. This apparently gave a free opening into the lower colon as patient began to have bowel movement in normal way.

The colostomy opening is rapidly drawing in and closing especially after he was up in wheel chair and walked about room.

Patient was discharged on October 7, on twenty-eighth postoperative day feeling well but colostomy wound still draining. This is to be closed later if does not close itself.

#### Vicksburg Sanitarium Staff Meet .....

Abstract.—Tularemia—Dr. G. C. Jarratt.

White male, aged 9 years.

Chief Complaint—Fever, enlarged nodes in right groin.

Present Illness—Chill three weeks ago followed by fever for three days, as high as 102°F. in p. m. and normal in a. m. Then no fever for four days. Fever from 99 to 101°F. except for one night when it was 103°F.

About four weeks ago child pulled a "tick" from the skin just above right iliac crest. Glands of right groin became enlarged two weeks ago; incised by family physician four days ago and draining since. Two weeks ago skin at site of bite broke down and ulcer is now present. Past History—Not relevant. Physical Examination.—Well developed and nourished, not acutely ill. Spleen two fingers' breadth below costal margin. Liver two fingers' breadth below costal margin. Small punched out ulcer size of silver dime just about iliac crest on right side. One mass of nodes in right groin, size of English walnut. Skin in this region red and tender. Incised wound in center of mass with scant purulent drainage.

Clinical Laboratory—Urine not remarkable. Blood: hemoglobin 87 per cent; erythrocytes 3,780,000; leukocytes 8,200; lymphocytes 33 per cent, polymorphs. 66 per cent, eosinophils 1 per cent; no malaria found. Wassermann, Kahn, and Kline and Young tests negative. Agglutination tests for undulant fever negative. Agglutination tests for tularemia positive and confirmed by State Hygienic Laboratory.

Course And Treatment—Put to bed with hot wet boric acid solution dressings to right groin and zinc oxide dressing to ulcer. Two cc. of 1 per cent aqueous solution of mercurochrome was given intravenously, followed by severe chill. Mercurochrome repeated three days later with no chill. In hospital one week. For five days fever between 99°F. and 101°F. except following the chill. Fever normal for two days before discharge; ulcer healing and nodes in groin much reduced in size with less drainage. Discharged home with directions for rest in bed, regular diet, haliver oil globule

twice daily and one lextron capsule three times daily.

Seen in out-patient department one week later. No fever since discharge, eating well, ulcer entirely healed. Glands very small with no drainage. Count, 4,950,000; hemoglobin 92 per cent.

Seen in out-patient department one week later. No fever. Appetite good; up and about house for past week. Glands size of peanut kernel, not tender, no drainage. Discharged from observation and allowed to return to school.

#### OSCAR ALLEN TUMOR CLINIC CHARITY HOSPITAL NEW ORLEANS

The scientific meeting of October was called by Dr. James T. Nix, Director. The essayist was Dr. Blaise Salatch who presented the following paper.

##### RADIUM THERAPY IN ORAL MALIGNANCY

Radium application in the treatment of malignant neoplasms of the oral cavity has been considered by many medical and dental clinicians in the past as a simple procedure. It is only when one has come in intimate and prolonged contact with this division of radium therapy that its importance and very often tedious execution is fully realized.

In the first place, too little consideration is given to the actual importance of oral malignancies. Few people realize the large number of lesions that appear in the mouth, some being mere benign growths, others the forerunners of cancer, as in the case of different forms of leukoplakia, or again, malignant neoplasms from their very inception.

Neglect is most often responsible for the advanced stages in which most oral cancers are seen by the clinician. If these cases would be seen in their incipency, diagnosis of malignancy made by early biopsy, (since this is our only definite means of diagnosis) the results with radium would be much more successful. It is easy to understand that if radium is applied in the early stages of a malignant growth, the lesion is small and requires less radium, therefore less post irradiation reaction is produced. Since the oral cavity is made up very much of very delicate membranes and vital structures it will not tolerate severe traumatism and the milder treatments are distinctly advantageous.

In applying radium in the mouth we first must determine whether interstitial or surface application is indicated. The type of radium used is greatly determined by the location of the neoplasm. If the growth is on the palate or along the alveolar ridge where there is only a thin layer of periosteal tissue covering the bone, a radium plaque should be chosen. If the lesion involves thick soft tissue,



radium needles are preferable. The amount of milligram hours of radium to be applied has been variously estimated. It approximates two hundred to two hundred and twenty-five milligram hours of gamma radiation for every cubic centimeter of neoplastic tissue. Some clinicians may consider this a heavy dose, but if properly shielded and filtered, remarkable results occasionally follow.

Soft tissue involvement requires less filtering than malignant tissue which is covering osseous parts. One thickness of one fourth millimeter of lead sheeting is generally used in the mouth as a proper filter in addition to the filter on the radium tubes which are encased completely by this sheet of lead, making sure that no small holes are left open at the ends. Now, to shield the surrounding tissues from the action of the radium rays, two layers of lead, one, one-fourth, and one, one-half millimeter, are then used to cover the tubes. These two outer layers are cut away in the region of the plaque going against the lesion, having the rays filter through only one-fourth millimeter of lead. This window could be called the functioning portion of the radium plaque. The surface of the plaque mentioned above should envelop the lesion about one-half inch all around its edges, insuring the full irradiation of any small area or border surrounding the mass unseen by the naked eye. The plaque is then covered by a layer of adhesive plaster after all sharp edges have been rounded and smoothed to prevent undue trauma to the mouth tissues. It is then carefully placed against the lesion, making sure that the window of the plaque is directly over the lesion and does not overlap too much into healthy tissue. Dental modeling compound is used to hold this plaque securely in its proper position. It is first placed in hot water and made soft and plastic. Holding the plaque in place with one hand, the compound is well adapted around and over the plaque with the other. A portion of the mould is then extended outside the mouth and adapted to a portion of the face surrounding the mouth. When applied in the lower part, the mould is brought out over the skin, and out over the cheek and molar process in the case of upper insertions. This gives the mould a somewhat firm and solid foundation which prevents its moving out of position. If, before the application of the mould, the patient shows signs of gagging or gives a history of being susceptible to nausea, the gagging reflexes are diminished by swabbing carefully the back of the throat with a 10 per cent cocaine solution, care being taken not to allow any of the solution to drip down the patient's throat, thereby anesthetizing the epiglottis. This point should be well remembered as fatal results can follow this anesthetizing of the swallowing mechanism. The modeling compound mould

is held secure on the outside of the face by means of strips of adhesive plaster having its ends bound well to the skin.

In cases having the neoplasm in somewhat thick soft tissues, one to ten milligram radium needles can be used successfully. With old type needles having monel metal filtration, twelve and one-half per cent of beta rays were liberated. This often caused a severe sloughing and consequently a more serious condition than was had before its application. But today platinum needles are used which reduce the sloughing to a minimum degree. A 2 per cent special Procaine solution containing Epinephrin is injected locally before the insertion of the needles. Often a thin layer of modeling compound is adapted to keep the needles imbedded in position. Thin wires which are attached to the needle are brought outside the mouth and made secure with a strip of adhesive plaster.

In some cases where a mild but prolonged irradiation is required, the radium needles are imbedded in the modeling compound mould after it has been adapted well over the lesion, hardened and removed from the mouth. The needles are so arranged as to have an overlapping of their rays to insure an even and balanced distribution. This is properly filtered with a layer of lead foil over the needles, and two layers, one and one-fourth to one and one-half millimeters thick, well adapted to the outside for shielding and preventing any outside radiation. The whole appliance is then coated with a thin layer of paraffin to keep it clean and from absorbing the secretions of the mouth. In this manner it can be easily removed for feeding the patient and also to keep up the proper oral hygiene.

Some moulds have been kept in the mouth almost continuously for a period of eight days and could have been kept longer if necessary without any discomfort to the patient. Cases of malignancies of the tongue, especially the anterior and lateral two-thirds, present quite a problem, first to irradiate the lesion and only the lesion and not the surrounding structures, and second, to allow the patient enough comfort to endure the application over a somewhat long period of time. If the lesion is superficial, surface radiation is chosen; in this instance, the radium must be held firmly in place and not allowed to move. This is accomplished by means of fine German silver wires passed through the tongue and twisted together on the upper surface of the plaque. We must first prepare the plaque after determining how much radium is necessary, carefully filter and shield the rays, having the edges of the plaque smooth and round as possible. The window of the plaque is placed temporarily against the lesion and with a swab containing tincture of iodine the tongue is marked at the position where the wire sutures will



pass through. A 2 per cent special procaine solution is then applied locally to the area where these wires will penetrate, injecting slowly along the intended course. With a medium sized curved needle, with the wire threaded in the end, the sutures are passed through the tongue having the loose ends within, above, or below the tongue, depending on the location of the lesion. The plaque is placed carefully in position, held firmly, and the ends of the wires twisted together, holding the pack quite securely in place. This method of retention can be accomplished quite painlessly and enables the patient to swallow freely and insures our irradiating the involved area of the tongue.

All applications of oral radium should be done with the patient in bed with the head somewhat elevated to prevent a smothering sensation. A suction should be used to extract the excess salivary flow, but if one is not available, a cigarette drain very often suffices. A sedative can be given a restless patient to prevent any undue moving and perhaps dislocation of the mould.

Together with radium therapy in the oral cavity, deep x-ray has been very successfully used, to insure against any glandular involvement, if no metastasis is present, and to prevent further development if the cervical lymph glands are hard and palpable. Doses from 1,600 to 3,200 R Units of deep x-ray are applied to both sides of the neck, usually through one portal or sometimes two, the opposite side being irradiated as a precautionary measure. This may be given over a short period of time in quite large doses or extended, depending on the nature of the lesion and glandular involvement. Very often we have a secondary edematous reaction but this usually subsides nicely under treatment.

In discussing the application and importance of radium therapy, I attempted only to discuss the general methods and forms of application used in the tumor clinic of Charity Hospital. Only with time and experience and the actual usage of radium can the clinician be able to determine what procedure is best followed out and the most successful results obtainable.

#### J. T. NIX CLINIC NEW ORLEANS

At a meeting held in October, Doctor Monte F. Myer presented the following paper.

#### SINUS DISEASE IN CHILDREN

Nasal sinus disease in children has existed since time immemorial, but it has come into prominence only within the last few decades. It is most opportune for every physician to realize its existence, as the laity are now becoming educated to the fact that children do have sinus trouble and want to know about it. Sinus disease has become such

a feared disease by adults that it is our duty to disseminate the facts and assure our patients that, when properly treated, it can be cured. We know that every time we have a head cold, our sinuses become involved, but fortunately nature heals us and leaves our sinuses intact. When, however, because of repeated colds, the sinus mucosa becomes more and more involved, the membranes can no longer return to normal and diseased sinuses result. Diseased sinuses can no longer function normally and thus blockage and purulent formation occur. If the ostia remain open we have discharge without pain. If the pus can not escape, we have an empyema with pain, like the pain caused by pus in any other closed cavity.

To realize that children may have sinus disease it is necessary to know at what age the different sinuses are formed. About the forty-fifth day in the fetus, intra utero, the nasal sinuses begin to differentiate. The ethmoid cells are then formed and these later grow upward to form the frontal sinuses and downward to form the antra. At this time we see the furrows for the lateral wall of the nose, the lower becoming the inferior turbinate, the middle turbinate, and the upper the superior turbinate. The space or meatus between the turbinates is where the ostia of the sinuses open. The antra are formed about the same time. The sphenoid sinuses are evolved by a constriction of the upper and middle nasal ridges and grow into the body of the sphenoid. For practical consideration, the frontals do not become a source of consideration until about the sixth year, at which time they may become diseased. At thirteen the antrum has reached its adult size. The anterior ethmoidal cells are the sinuses most frequently involved, then the antrum, sphenoid, frontal, in the order named.

How is the sinus disease recognized in children? —By chronic, constant, continuous nasal discharge. Many children have a chronic cough not explainable by lung findings, some have stomach disturbance, due to swallowing of pus from the sinuses. Pain is rarely a symptom in children and they seem to thrive as well as normal children. Occasionally they complain of headaches on arising, which usually disappear after they have been up for some time, due to position and drainage. The reasons for examining the nasal sinuses of children are: (1) cough, (2) undetermined temperature, (3) enlarged cervical glands, (4) malnutrition, (5) ocular disturbance especially of lids or conjunctiva, (6) asthma, (7) arthritis, and (8) heart disease.

The diagnosis is made by inspection, transillumination and x-ray. What I have said applies to the chronic and subacute types of sinus infection and mainly applies to the antrum and anterior ethmoids. There are at times acute infection of the

ethmoids and the history of the case is like this: Child has had an acute cold with temperature ranging from 100° to 104° and nasal discharge and then one or both eyelids begin to swell progressively—edema of both palpebral and bulbar conjunctiva with pain and exophthalmos. This edema may be passive due to pressure of the pus in the ethmoidal labyrinth pressing on the veins in the orbital fat; or it may be due to a rupture with extension of pus into the orbit. These cases are quite alarming and it is necessary to determine whether surgery is indicated or to attempt medical or conservative treatment. When there is induration and fixation of the eye, surgery is imperative.

Frontal disease is rare in children. I have never seen one, as the frontal sinus does not develop large enough to be of importance until at about six years of age.

The sphenoid sinus is of importance because of its relation to the ophthalmic and maxillary nerves and of its proximity to the pterygoid or Vidian canal with its structures producing trigeminal or Vidian neuralgia. The most important factor is the relation of optic neuritis with sudden loss of vision usually in one eye without any pathological findings in the optic nerve head.

#### Treatment

**Constitutional:** It is necessary that the oto-laryngologist work in close harmony with a pediatrician or family physician. All possible factors should be corrected and I incline to some form of irradiated cod liver oil, well balanced diet and inclusion of many vegetables.

(1) *Medical or conservative.* Astringents and antiseptics as ephedrine or adrenalin with merthiolate, argyrol, neosilvol or other antiseptic. The drops must be placed in the child's nose so it comes in contact with the middle turbinate. The Proetz position is best; patient lying supine with the head extending over the edge of a bed and dropped so the nose is uppermost. The head is held in this position for ten minutes and then the patient is allowed to sit up and suction is applied. I use electric suction at the office and Dee hand suction syringe at home. This is done at first twice daily and as the case improves once daily. At the office I use the Dowling tampons with argyrol and ephedrine. The astringent drops are used several times a day. In the acute ethmoidal type, cold compresses are used until the edema disappears. (2) *Surgical.* Where a case of maxillary sinus has been under conservative treatment for four to six weeks without improvement then surgery is done,—a naso-antral opening with as little damage to structures in the floor of the antrum as possible as the permanent teeth are not erupted. In the acute ethmoidal type of sinusitis, removal of the middle turbinate or at times an external

ethmoidectomy, if there is an external fistula, is done. In cases of optic neuritis with blindness progressing, a sphenoidectomy should be performed.

A few cases are illustrated as follows:

**Case 1.** Child, age 5 years. Tonsils and adenoids removed 18 months ago; nasal discharge, bilateral, for past year. Runs temperature off and on, 99° to 100°. Appetite poor; weight stationary. X-ray showed both antra cloudy. Child put on conservative treatment for three weeks with no improvement. Bilateral naso-antral opening with removal of tonsil and adenoid tags. Further use of conservative treatment after operation plus supportive measures, irradiated cod liver oil, sunlight. Nose cleared up entirely. Child gained weight. Appetite improved. Cough disappeared.

**Case 2.** Baby G., age 21 months. Temperature 103° to 104°. Nose filled with pus. Both eyes closed. Eyelids swollen. Exophthalmos, swelling of bulbar and palpebral conjunctiva. Fixation of right eye with induration. Conservative therapy reduced left eye but it was necessary to do a middle turbinectomy on right with a slow but complete recovery.

**Case 3.** Girl, age 14, with vision in left eye reduced to finger count at three feet. Noticed loss of vision suddenly. Pus in left nares. X-ray showed left ethmoid and sphenoid involvement. Empyema of left sphenoid. Sphenoidectomy under local. Vision returned to normal within forty-eight hours. No further treatment.

There is still a further type of nasal discharge in children with negative transillumination and x-ray. The nose looks like the infectious type but secretion shows an increase of eosinophiles, the allergic type. This is hard to treat as allergy is yet in its infancy but we are making some headway in these cases, though it is still in the experimental stage. In such children, allergic tests should be made and sensitive foods eliminated from the diet; should pollens or grasses be the causative factor, a serum can be given.

There is still an issue which has never been satisfactorily proven or disproven as to whether the removal of tonsils and adenoids does not make children more susceptible to nasal sinus disease. My own opinion, from personal experience, is that sinus disease occurs, regardless, and is less amenable to treatment in the non-tonsillectomized than in the tonsillectomized child. Where there are tonsils or adenoids, they should be removed and this also applies to tonsil and adenoid remnants.

#### SUMMARY

(1) Sinus disease does not exist in children from infancy up.

(2) Cure can be obtained with correct diagnosis and painstaking treatment.

(3) Local treatment should be given only by

the otolaryngologist and supportive measures only by the pediatrician or family physician.

(4) The lay public must be educated not to neglect sinus disease in children and not to fear it.

#### MERCY HOSPITAL

The regular monthly meeting of the Mercy Hospital Staff was held on October 2, 1935, with Dr. J. E. Brierre presiding.

Dr. E. L. Zander presented an interesting paper on obstetrical statistics of Charity Hospital from 1927 to 1934 inclusive. Comparison was made on statistics from the year of 1927 to 1931 and 1931 to 1934. The total number of obstetrical cases and abnormal ones had shown a marked increase in the last four years (1931-1934). Caesarian sections and podalic version were about the same. Puerpal septicemia showed increase in the last three years.

Two deaths were then discussed. The first case was that of a pyometra with chronic appendicitis, followed by peritonitis. In this case the pus from the uterus entered the abdominal cavity. The patient seemed to be doing nicely for a few days, but then took a turn for the worse when peritonitis developed. Her condition was then on the down grade and patient expired two to three days later. The second case was that of an appendicitis also, the patient being very sick on admittance due to the appendix having ruptured, which resulted in the death of the patient. This case was the result of the usual method of giving a purgative for abdominal pain without proper examination and diagnosis. This was not the fault of the operator as patient was brought from out of town in that condition.

R. A. Oriol, M. D.

Secretary

## TRANSACTIONS OF ORLEANS PARISH MEDICAL SOCIETY

#### CALENDAR

NOVEMBER 2 Eye, Ear, Nose and Throat Hospital Staff, 8 P. M.

NOVEMBER 6 Clinico-Pathological Conference Touro Infirmary, 11:15 A. M. to 12:15 P. M.

NOVEMBER 6 Mercy Hospital Staff, 8 P. M.

NOVEMBER 8 Pathological Conference, Hotel Dieu, 11 A. M. to 12 Noon.

NOVEMBER 8 French Hospital Staff, 8 P. M.

NOVEMBER 11 ORLEANS PARISH MEDICAL SOCIETY, 8 P. M.

NOVEMBER 13 Touro Infirmary Staff, 8 P. M.

NOVEMBER 15 Pathological Conference, Hotel Dieu, 11 A. M. to 12 Noon.

NOVEMBER 15 I. C. R. R. Hospital Staff, 12 Noon.

NOVEMBER 18 Hotel Dieu Staff, 8 P. M.

NOVEMBER 19 Charity Hospital Medical Staff, 8 P. M.

NOVEMBER 20 Clinico-Pathological Conference Touro Infirmary, 11:15 A. M. to 12:15 P. M.

NOVEMBER 20 Charity Hospital Surgical Staff 8 P. M.

NOVEMBER 21 Eye, Ear, Nose and Throat Club, 8 P. M.

NOVEMBER 22 Pathological Conference, Hotel Dieu, 11 A. M. to 12 Noon.

NOVEMBER 25 ORLEANS PARISH MEDICAL SOCIETY, 8 P. M. Nomination of Officers, 1936, and Election of Delegates to the Louisiana State Medical Society.

NOVEMBER 26 Baptist Hospital Staff, 8 P. M.

NOVEMBER 27 Clinico-Pathological Conference, Touro Infirmary, 11:15 A. M. to 12:15 P. M.

NOVEMBER 29 Pathological Conference, Hotel Dieu, 11 A. M. to 12 Noon.

During October, besides the regular meeting of the Board of Directors, the Society held two meetings. Monday, October 14, a joint Scientific and Third Quarterly Executive Meeting was held. The following program was presented:

#### SYMPOSIUM ON LOW BACK PAIN

Dr. John F. Dicks—Gynecological Aspects of Low Back Pain.

Dr. John G. Pratt—Urological Aspects of Low Back Pain.

Dr. G. C. Battalora—Orthopedic Aspects.

There was no discussion.

Reports of the Officers and Special and Standing Committees for the Third Quarter were read.

On Monday, October 28, a joint Clinical Meeting of the Orleans Parish Medical Society with the Charity Hospital Staff was held in the Miles Amphitheatre, Charity Hospital. Interesting cases were presented and discussed.

The Secretary, Dr. H. B. Alsobrook, has been in St. Paul, Minnesota, where he underwent an operation on his eyes. It is hoped he will be back with us soon.

Drs. Chas. A. Bahn, W. R. Buffington, Wm. B. Clark, J. R. Hume, John Gooch and Wm. A. Wegner attended the meeting of the National Academy of



Ophthalmology and Otolaryngology held in Cincinnati.

Dr. Howard A. Mahorner has been given an award by the American Association for the advancement of Science for his study in connection with the causes of goiter.

Drs. C. C. Dauer and R. A. Strong attended the Southern Tuberculosis Conference and Sanatorium Association held at the Rice Hotel, Houston recently.

Dr. John H. Musser addressed the Pike County Medical Society at McComb, the Gorgas Medical Society at Tuscaloosa, and the Chattanooga Medical Society at Chattanooga, last month.

Dr. Frederick L. Fenno attended the meetings of the American Public Health Association and American Association of School Physicians.

Drs. Wm. B. Clark and Neal Owens were guest speakers at the meeting of the Jefferson County Medical Society in Birmingham.

It is with the deepest regret that we record the deaths of two of our oldest members of the Society. Dr. Ernest Sidney Lewis, one of the charter members of the Orleans Parish Medical Society died August 21, 1935. Dr. Felix A. Larue died October 5, 1935.

The Magnolia School for Deficient Children was opened October 1. This school is to be in charge of teachers well qualified and trained for this particular type of work. The following members of the Orleans Parish Medical Society comprise the medical advisory board of the institution: Dr. Chas. J. Bloom, General Chairman; Drs. Ruth Aleman, Gilbert C. Anderson, H. A. Bloom, W. W. Butterworth, Frederick L. Fenno, Julian Graubarth, C. S. Holbrook, O. Joachim, F. E. LeJeune, Maud Loeber, Urban Maes, E. A. Socola, Jack E. Strange, R. A. Strong and Geo. J. Taquino.

#### TREASURER'S REPORT

ACTUAL BOOK BALANCE: 8/31/35.....	\$385.22
September Credits: .....	\$156.58
TOTAL CREDITS: .....	\$541.80
September expenditures: .....	\$439.41

ACTUAL BOOK BALANCE: 9/30/35.....	\$102.39
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#### LIBRARIAN'S REPORT

This has been the Library's busiest summer since its reorganization began in 1920. It is

interesting to note that more books were loaned to doctors during September than during any month in 1935. The circulation to doctors during July was 535, August 554 and September 858. Loans to students brought the totals to 744, 699 and 1039 respectively, or a total for the quarter of 2,482. The statistics do not include the great use of books and journals in the Library Rooms.

Material has been collected on 34 subjects at the request of physicians during July-September, as follows:

Medical ethics  
Coccydynia  
Pathology of venoms  
Hormone therapy in ocular diseases  
Mycosis fungoidis  
Tumors of iris  
Treatment of x-ray burns  
Congenital heart disease  
History of dentistry in New Orleans  
Causalgia  
Eyes and endocrines  
Operative technic for hydrocele  
Thrombosis of portal vein  
Pseudo-Graefe's sign—unilateral  
Original articles of Smythe and Souchon on subclavian aneurysm  
Walker's needle in detached retina  
Hunner's ulcer  
Mucus and mucin biochemically considered  
Hypernephroma of ovary  
Anetoderma erythmatodes  
Jodassohn's disease  
Noise and the nervous system  
Breech presentation  
Pyelitis (1931-35)  
Obstetrical and gynecological peculiarities of negro  
Fracture of femur  
Spivak method of gastrostomy  
Osler's estimate of Gorgas' work  
Pillodol in bronchiectasis  
Aneurysm of heart  
Torsion of the adnexa  
Encephalitis as sequel to empyema  
Superior hypogastric sympathectomy  
Gynecological significance of low back pain.  
One hundred and thirty-six books have been added to the Library during the Third Quarter. Of these 44 were received by binding, 72 by gift, 1 by purchase and 19 from the New Orleans Medical and Surgical Journal.

#### NEW BOOKS

Greenwood, Major—Epidemics and Crowd Diseases. 1935.  
Livingston, W. K.—Clinical Aspects of Visceral Neurology. 1935.  
Jacks, L. V.—Mother Marianne of Molokai. 1935.



Graham, E. A.—Surgical Diseases of Chest. 1935  
 Harnes, A. R.—Clinical Management of Syphilis. 1935.  
 Bryce, Alexander—Ideal Health. 1935.  
 Joll, C. A.—Aids to Surgery. 1935.  
 Key, J. A.—Management of Fractures, Dislocations and Sprains. 1935.  
 Hinman, Frank—Principles and Practice of Medicine. 1935.  
 Harvey Society—Harvey Lectures, 1933-34. 1935.  
 Osler, Sir William—Principles and Practice of Medicine. 1935.  
 Petersen, W. F.—Patient and the Weather. v. 2 1934.  
 Washington Institute of Medicine. v. 6. 1934.  
 Milbank Memorial Fund—Annual Report. 1934.  
 Dorland, W. A. N.—American Illustrated Medical Dictionary. 1935.  
 Dominguez, Francisco—Docteur Carlos Finlay. 1935.  
 Goldthwait, J. E.—Body Mechanics. 1934.  
 Novak, Emil—Woman Asks the Doctor. 1935.  
 Helse, F. H.—1000 Questions and Answers on T. B. 1934.

Kanner, Leo—Child Psychiatry. 1935.  
 Lockhart-Mummery, J. P.—Diseases of Rectum and Colon. 1934.  
 Lewis, Dean, ed.—Practice of Surgery. Index. Abrahamson, Isador—Lethargic Encephalitis. 1935.  
 Cornell University Medical College—Studies from Physiology Department. 1932.  
 Milbank Memorial Fund—Policies and Procedures in Public Health. 1935.  
 Fossier, A. E.—History of Medical Education in New Orleans. 1934.  
 Dios Chemical Company—Syndromes and Signs in Medicine. 1933.  
 Reid, W. D.—Teaching Methods in Medicine. 1933.  
 Berry, G. H.—Idleness. 1933.  
 Lilly Research Laboratories—Dedication. 1934.  
 Account of the College of Physicians of Philadelphia. 1934.  
 U. S. Labor Department—Maternal Mortality in 15 states. 1934.

H. B. Alsobrook, M. D.  
 Secretary

## LOUISIANA STATE MEDICAL SOCIETY NEWS

### ST. LOUIS MEDICAL SOCIETY INVITES SOUTHERN PHYSICIANS

The 29th Annual Meeting of the Southern Medical Association, the second largest medical organization in the United States, will be held in St. Louis November 19-22.

The unusual clinical facilities of the two medical schools and the numerous hospitals, combined with the high standing of the medical profession, and the excellent hotel accommodations make St. Louis an ideal city for this medical gathering.

Addresses and papers will be presented by distinguished clinicians, not only from the South, but from all over the United States as well as from several foreign countries.

The St. Louis Medical Society extends a very cordial invitation to all physicians in good standing in their State and Provincial medical societies to attend this meeting.

### SOUTHERN MEDICAL ASSOCIATION

Please be good enough to give us a little space in your November issue, so that we may again call the attention of the profession of Louisiana and Mississippi to the fact that the great Southern Medical Association will hold its twenty-ninth annual session in St. Louis, beginning November 19.

A wonderful scientific and entertaining program has been planned and a large attendance is expected and arranged for; St. Louis is well supplied with first-class hotels, of which the Jefferson is

the headquarters for the meeting; this excellent hostelry is only about four blocks from the mammoth new auditorium, where the meetings will be held.

We want a larger membership from our states, so that we are urging all who can possibly get away to come to St. Louis and whether they can come or not, we want every member of our state societies to send in his application and join this worthy organization, thereby promoting a good cause and, at the same time keeping up with the papers read at the meeting through the official journal, the Southern Medical Journal, which alone is well worth the amount of the annual dues.

Will we meet you in St. Louis? WE HOPE SO!

A. A. Herold, Councillor for La.

### PREVENTION OF EYE DISEASES

The inauguration of a new clinic for the prevention of eye diseases, sponsored by the department of ophthalmology, Tulane Graduate School of Medicine, was announced and explained by Dr. M. Earle Brown, head of the department, in a lecture delivered October 9, 1935, at the Eye, Ear, Nose and Throat Hospital, where the clinic will be conducted.

"Such a clinic has not been offered in New Orleans before," Dr. Brown said, "and we believe it to be new in America. As you know, the clinics in this hospital are for the purpose of conserving vision and preventing blindness. The new clinic

will endeavor to prevent the diseases which cause blindness.

"In the management of such a clinic one must consider ways and means of educating the masses in: how to care for the eyes from infant life to the last stages of life.

"Parents must be instructed how to take the proper care of that most precious possession, the child's eyes. All handicaps, whether from disease, crossed eyes, defective vision of improper illumination, should be remedied before the child enters school.

"We do not expect crippled children to compete in marathon races or to become football heroes, then why should we expect children with optical defects to compete with children with normal vision?

"Another problem is the pre-occupational period. When a child finishes school the parents believe that he will succeed best in doing the thing he likes best. At this critical period no attempt is made to determine the fitness of his eyes to the occupation he is going to follow and many times years of apprenticeship are wasted which could have been saved by a pre-occupational eye examination.

"The proper care of children's eyes during epidemics must be explained to parents in order that the infection not be carried from one eye to the other and from one member of the family to the other."

The clinic will cooperate with the work being planned by the Louisiana Sight Saving council, and a sight-saving day, or week, will be announced later, when the eyes of all applicants will be examined free.

A film made by lighting engineers and used by the council as part of their educational work in bringing the message of sight-saving to the public, was shown following Dr. Brown's lecture.

#### SOCIETY FOR PREVENTION OF BLINDNESS

The annual conference of the National Society for the Prevention of Blindness will be held at the headquarters of the Society in Rockefeller Center, New York, December 5-7, it is announced by Lewis H. Carris, managing director. Among the topics to be discussed will be: Medical Social Eye Work; The Prevention of Eye Accidents Caused by Fireworks; and The Division of Responsibility between Official and Unofficial Agencies in the Movement for Prevention of Blindness.

Mr. Carris also announced the election of the following as honorary vice-presidents of the Society: Dr. George E. DeSchweinitz of Philadelphia, emeritus professor of ophthalmology in the Medical School, University of Pennsylvania; Dr. John

H. Finley, associate editor of the New York Times; and Miss Lillian D. Wald, president of the Henry Street Settlement of New York City. Other honorary vice-presidents of the Society are: United States Senator Thomas P. Gore of Oklahoma; Helen Keller; and Mrs. Winifred Holt Mather.

#### GRADUATE SCHOOL OF MEDICINE

##### THE TULANE UNIVERSITY OF LOUISIANA

Dr. H. W. Kostmayer, Dean and Professor of Gynecology in the Graduate School of Medicine, The Tulane University of Louisiana, attended a meeting of the 8th District Medical Society held at Alexandria, La., Wednesday, October 2, 1935, and gave an address during the demonstration of a moving picture film on Cervical Cesarean Section.

Dr. O. W. Bethea, of the faculty of the Graduate School of Medicine, The Tulane University of Louisiana, addressed the Fourth District Medical Society at Shreveport, La., on Tuesday, October 1, 1935, on "Cardiac Reserve."

Dr. C. C. Dauer, of the faculty of the Graduate School of Medicine, The Tulane University of Louisiana, was on the program for the Southern Tuberculosis Congress held at Houston, Texas, September 16, 17 and 18. Dr. Dauer also attended the meeting of the American Public Health Association held at Milwaukee, Wisconsin, October 7 to October 10, 1935.

In addition to the regular eye clinic at the Eye, Ear, Nose and Throat Hospital there will be instituted a clinic for the prevention of eye diseases which is strictly educational, and under the auspices of the Graduate School of Medicine of The Tulane University of Louisiana.

Dr. John T. Sanders, of the faculty of the Graduate School of Medicine of Tulane University, attended the meeting of the Harris County Medical Society held in Houston, Texas, on October 9, 1935, and read a paper on "Office Management of Commonly Neglected Gynecological Conditions."

#### UNITED STATES PUBLIC HEALTH SERVICE NOTES

Surgeon Richey L. Waugh, has been directed to proceed from New Orleans, La., to San Francisco, and Oakland, Calif., for the purpose of reading a paper and to give a clinical demonstration under the Section of Orthopedic Surgery at the meeting of the Clinical Congress of the American College of Surgeons, October 21 to November 1, 1935, and return.

Medical Director L. L. Lumsden, has been directed to proceed from New Orleans, La., on or about November 18, 1935, to St. Louis, Mo., and return, for the purpose of attending the meeting of the Southern Branch of the American Public Health Association, November 19-23, 1935.

Passed Assistant Surgeon B. O. Lewis, has been relieved from duty at New Orleans, La., and directed to proceed to Galveston, Texas, and report to the Medical Officer in Charge of the Marine Hospital.

Surgeon M. F. Haralson, has been directed to proceed from Washington, D. C., to Richmond and Charlottesville, Va., in connection with rural health work, and return to New Orleans, La.

The many friends Dr. O. E. Denney made during his long time service at the Marine Hospital at Carville, will learn with regret of his being transferred to a new post in the United States Public Health Service. Dr. Denney has always cordially welcomed visiting physicians to the leprosarium. Every year he greeted most hospitably and put on a magnificent clinic meeting for the senior class at Tulane. For ten years now the graduates of this school have had an unequalled opportunity of seeing leprosy in all of its expressions. This has been made possible through the hearty cooperation of Dr. Denney.

The best wishes of the host of friends that he has made go with him in his new undertaking.

#### EXAMINATION FOR APPOINTMENT AS ASSISTANT SURGEON IN THE RESERVE CORPS OF THE U. S. PUBLIC HEALTH SERVICE

As examination for entrance into the Reserve Corps of the United States Public Health Service in the grade of Assistant Surgeon is hereby announced to be held November 18, 1935. Applicants must not have passed their thirtieth birthday. They must be graduates of a reputable medical college and have completed at least one year of internship since graduation, or its equivalent. Successful candidates will be ordered to active duty in the Reserve Corps, in which is expected that vacancies will occur soon after January 1, 1936, and will be eligible for examination for entrance into the regular commissioned corps when such examinations are held, provided they have not passed their thirty-second birthday.

The compensation of officers in the grade of Assistant Surgeon in the Reserve Corps is the same as that for officers in the Regular Corps; namely, with dependents, \$3,158 per annum; without dependents, \$2,699 per annum.

Boards will be appointed in various cities throughout the United States so as to avoid as much travel as possible, which, if necessary, must be made at the candidate's own expense.

Persons desiring permission to take this examination should make request to the Surgeon General, U. S. Public Health Service, Washington, D. C., for the necessary blanks and other information.

H. S. Cumming,  
Surgeon General.

#### HEALTH OF NEW ORLEANS

The Department of Commerce, Bureau of Census, reports that for the week ending September 14 there were reported 140 deaths in the city of New Orleans, divided 82 white and 58 colored. This made the death rate for the group as a whole 15.2 with the white death rate 12.5 and the negro 21.7. The infant mortality rate this week was 101, the colored rate being 190 and the white 47. In the succeeding week, ending September 21, there was a slight increase in the number of people who died in the city. This week there were 78 white deaths and 69 colored, making a total of 147 deaths with a total death rate of 15.9, the rate for the white race being 11.9 and the negro 25.8. The infant mortality rate was 119, largely as a result of the tremendously high rate of 237 for negro infants. The week ending September 28 again showed a rise in the number of deaths with a total of 161 deaths for the two races, 91 white and 70 colored. The death rate for the group as a whole was 17.4, for the white 13.9 and for the colored 26.2. The infant mortality rate was only 107. There was a big drop in the number of deaths for the week ending October 5, these falling to 136 of which 87 were in the white race and 49 in the colored. The death rate for the two groups as a whole was 14.7, the white rate being 13.3 and the colored 18.3. Part of the drop in the total number of deaths might be explained on the basis of the pronounced drop in the infant mortality rate which was only 53 for this week.

#### INFECTIOUS DISEASES IN LOUISIANA

Dr. J. A. O'Hara, Epidemiologist for the State of Louisiana, has furnished us with the weekly morbidity reports for the State of Louisiana, which contain the following summarized information: For the thirty-eighth week of the year ending September 21, there were reported 159 cases of malaria, 39 of typhoid fever, 36 of pneumonia, 35 of syphilis, 32 of diphtheria, 30 of pulmonary tuberculosis, 21 of cancer and 16 of scarlet fever. The big jump in the number of cases of typhoid fever reported this week was due to the report of cases from 21 different parishes, eight of which came from West Carroll, 4 from Red River and 3 each from Bienville and Jackson Parishes. Two cases of poliomyelitis were reported from Orleans Parish. For the thirty-ninth week of the year ending September 28, the following diseases were listed in double figures: malaria again led the important diseases, there being 136 cases reported. There were also 41 cases of pneumonia, 31 of cancer, 27 of typhoid fever, 26 of pulmonary tuberculosis and 13 of syphilis. This week Jackson Parish with 9 cases reported, followed by Caddo with 3 and Lafayette with 3 were the chief sites of typhoid fever cases. One case of poliomyelitis was report-



ed from Catahoula Parish. In the fortieth week of the year ending October 5, malaria was still way ahead of the other reportable diseases in the numbers listed for the week. There were 148 cases sent into the office of Dr. O'Hara this week. Other diseases occurring in double figures were as follows: 57 cases of pulmonary tuberculosis, 40 of pneumonia, 28 of cancer, 26 of diphtheria, 20 of syphilis, 15 of scarlet fever. Typhoid fever this week fell, there being 7 cases reported for the week. Two cases of undulant fever occurred, one in Caddo and one in Orleans Parish. For the next week, ending October 12, malaria had 89 cases and syphilis had increased to 62. There were also listed 18 cases of cancer, 16 of pulmonary tuberculosis, 15 of pneumonia, 14 of diphtheria, 12 of typhoid fever and 11 of scarlet fever. Four cases of poliomyelitis were reported, these coming from Avoyelles, LaSalle and Tangipahoa Parishes. No parish reported more than 2 cases of typhoid fever. The 4 cases of typhoid fever reported by the City Board of Health in New Orleans, were imported.

#### WOMAN'S AUXILIARY

Louisiana State Medical Society

President—Mrs. Herman B. Gessner, New Orleans.  
President-Elect—Mrs. James Byron Vaughn, Monroe.

1st. Vice-President—Mrs. Samuel B. Kreeger, Lake Charles.

2nd. Vice-President—Mrs. L. E. Shirley, Jennings.

3rd. Vice-President—Mrs. D. T. Milam, Monroe.

4th. Vice-President—Mrs. Harry R. Marlatt, Homer.

Treasurer—Mrs. Jos. E. Heard, Shreveport.

Recording Secretary—Mrs. James W. Warren, New Orleans.

Corresponding Secretary—Mrs. Leonhard E. Devron, New Orleans.

Parliamentarian—Mrs. C. E. Rew, Shreveport.

Dear Members and Co-workers in our Louisiana State Medical Auxiliary:—

With the coming of November, I feel you all be keenly alert and deeply interested in continuing your serious work in the Auxiliary. I feel I express your wishes when I say we are seeking to make our Auxiliary of such genuine service to the medical profession in our State that we shall enjoy the loyal support of every doctor, and our membership will include all of their wives.

I hope you have all read the letter of Dr. Courtland P. Gray, President of the State Medical Society, which appeared in the July number of the Journal. It is such a warm and cordial approval of our Auxiliary work. In the same number of the journal, you will see that Dr. Chailé Jamison, Past President, also expresses his warm approval of the Auxiliary movement.

Our relations with the State Medical Society are very pleasant and friendly. We are indeed grateful to Dr. John H. Musser, Editor-in-Chief, and Dr. Paul T. Talbot, General Manager, for the generous amount of space which is accorded us in the Journal.

Mrs. George Feldner is our Publicity Chairman and she has made excellent use of our space in the New Orleans Medical and Surgical Journal. I hope you are following it, as it gives a very interesting and complete review of our activities.

At the head of our space you will see the names of our elected officers. The following list covers the names of our Chairmen of Committees:—

Chairmen of Standing Committee:

Organization—Mrs. S. M. Blackshear, New Orleans.

Program—Mrs. Robert T. Lucas, Shreveport.

Finance—Mrs. L. A. Hebert, Lake Charles.

Legislation—Mrs. Arthur A. Herold, Shreveport.

Public Relations—Mrs. W. P. Gardiner, New Orleans.

Hygeia—Mrs. E. T. Milam, Monroe.

Revisions—Mrs. L. E. Shirley, Jennings.

Press & Publicity—Mrs. George D. Feldner, New Orleans.

Printing—Mrs. Chaillé Jamison, New Orleans.

Archives—Mrs. Alton Ochsnr, New Orleans.

Historian—Mrs. Isidore Cohn, New Orleans.

Exhibits—Mrs. W. P. Bordelon, Lake Charles.

Indigent Physicians' Fund—Mrs. Jules Myron Davidson, New Orleans.

Councilors—1st. District—Mrs. Roy B. Harrison, New Orleans.

2nd. District—Mrs. C. Grenes Cole, New Orleans.

3rd. District—No appointment.

4th. District—Mrs. C. B. Erickson, Shreveport.

5th. District—Mrs. C. P. Gray, Monroe.

6th. District—No appointment.

7th. District—Mrs. George Kreeger, Lake Charles.

8th. District—No appointment.

To most of us, these names have a friendly and familiar ring as they are women who have given loyal support and earnest work to the Auxiliary. They will need much assistance, and I bespeak for them a hearty response. You will hear much of the activities of our committees through Mrs. Feldner's facile pen.

It is so encouraging to see how many interesting projects are being carried out by the Auxiliaries. Their reports in the Journal are very helpful. They show a delightful combination of fine work and play.

You will recall at our meeting in April, the resolution to observe annually a "Doctors' Day" was unanimously carried. Dr. H. W. Kostmayer, President-Elect of the State Medical Society and



also Chairman of our Advisory Council, has given this project his hearty approval as you will see from his letter, which I quote:

"The more I think of the idea of setting aside a day to be known as "Doctors' Day," the more I am pleased with it. It seems to me that with the full force of the Auxiliary behind it, the movement will be a success from the first. The day should, in time, become one of the outstanding events of our medical year.

I hope you may decide to go forward with this plan; let me add that if it develops, that if I can do anything officially or personally, I will deem it a privilege as well as a pleasure to be of assistance."

Mrs. Vaughn, President-elect of the State Auxiliary has accepted the Chairmanship of the Doctors' Day project. Mrs. Vaughn is deeply interested in launching it in a way which will do high honor to the medical profession of our State.

The September Journal carries the program for the meeting of the Southern Medical Auxiliary in St. Louis in November. We are entitled to be represented by two delegates and two alternates, so if you are planning to go, please let me hear from you. If possible, we hope to have our full official representation. We were fortunate enough to have our full quota of delegates and alternates at the June meeting of the American Medical Association. Mrs. Herold's interesting report of the meeting was given in the Journal. It was very illuminating.

Mrs. Watkins is our Chairman of arrangements for the annual meeting in Lake Charles this year. It is some time off, but Mrs. Watkins is already enthusiastically making plans. All those who are fortunate enough to go will find a very cordial hospitality awaiting them.

One of the pleasant results of our annual meeting was the addition of four new names to our members-at-large. They are:

Mrs. Whyte G. Owen, White Castle.

Mrs. E. M. Levert, St. Francisville.

Mrs. Roy Carl Young, Covington.

Mrs. Henry E. Gautreaux, Covington.

It gives us great pleasure to extend to them a hearty welcome.

I feel that the Woman's Auxiliary to the Louisiana State Medical Society has the warm support of its members and has a year of fine achievement ahead of it.

With good wishes to every member, I am,

Sincerely,

Jessie H. Gessner,  
President, Auxiliary, Louisiana  
State Medical Society.

## SOUTHERN MEDICAL PROGRAM

Following are the complete details of the St. Louis meeting, which was promised you in last month's Journal:—

The twelfth annual convention of the Woman's Auxiliary to the Southern Medical Association will meet in St. Louis, November 19-22, 1935.

The pre-convention Board meeting will convene Wednesday, November 20, Hotel Jefferson, 9:30 A. M. Each State is entitled to send her President, two delegates and two alternates to the Convention, to form with the Auxiliary officers and Chairmen, the voting authority of the Auxiliary.

Business sessions follow: Each item has been timed and a promise that adjournment will be when designated or earlier is made:—

Register: Hotel Jefferson, November 19-21, 1935. Pre-Convention Board Meeting, Hotel Jefferson, 9:30 A. M., Wednesday, November 20, 1935.

Opening meeting with luncheon, Hotel Jefferson, Wednesday, November 20, at 12:30 P. M. All women attending the Convention are invited to attend. Tickets may be secured when registering.

Immediately after, at 2:30 P. M. or earlier, there will be a Round-Table Conference with five minutes exposition of plans on Organization, Health Education (program), Hygeia, History, and Archives. Each talk will be followed by questions from members. All women at luncheon are invited to attend this conference which will adjourn at 3:15 P. M.

It is necessary for members who are not officers and chairman to attend, because they are equally important in fulfilling the objectives of the Auxiliary and should understand Auxiliary functions.

Thursday, November 21: The annual meeting will be called at 9:30 A. M., with adjournment at 12:30 P. M. or earlier.

Special addresses:

Wednesday, Luncheon-meeting by Dr. H. Marshall, Taylor, Florida, President, S.M.A., ten minutes.

Advisory Committee, two minutes each for the three.

Mrs. Rogers N. Herbert, Tenn., President National Auxiliary, ten minutes.

Thursday: Mrs. David N. Long, Mo., Chairman Public Relations Committee National Auxiliary, ten minutes.

Thursday, 9:30 A. M., Post-convention Board Mrs. Oliver Hill, President presiding.

The program has been planned to be informing, non-fatiguing and happy. Time for social events, visiting, sight-seeing and rest will be plentiful.

The St. Louis and Missouri Auxiliaries send us gracious assurances of welcome, attention and hospitality. Let us honor our Medical Profession and acknowledge the invitation and generous re-

ception of the hostess Auxiliaries by attending this Convention.

# ORLEANS PARISH

New Orleans, La.

President—Mrs. W. Rogers Brewster, 1521 S. Carrollton Ave.

President-Elect—Mrs. W. P. Gardiner, 2315 S. Carrollton Ave.

1st. Vice-President—Mrs. J. W. Warren, 470 Audubon Blvd.

2nd. Vice-President—Mrs. Russell E. Stone, 1705 Napoleon Ave.

3rd. Vice-President—Mrs. Shirley C. Lyons, 2412 Pine St.

4th. Vice-President—Mrs. Edmond Souchon, 2931 St. Charles Ave.

Treasurer—Mrs. Jules Myron Davidson, 3824 Versailles Blvd.

Recording Secretary—Mrs. Ernest Allgeyer, 1139 Nashville Ave.

Corresponding Secretary—Mrs. H. Ashton Thomas, 3426 St. Claude Ave.

Historian—Mrs. Otto Joachim, 1911 Octavia St.

Parliamentarian—Mrs. Hermann B. Gessner, 119 Audubon Blvd.

Press and Publicity—Mrs. Ralph J. Christman, 1509 Dufossat St.

Meets second Wednesday of each month.

The Woman's Auxiliary to the Orleans Parish Medical Society met on Wednesday afternoon, October 9, at their first meeting-reception of the 1935-36 season. Mrs. W. Rogers Brewster, president, introduced the various chairmen and their committees so that each member might become familiar with the committee-workers and know just what the Auxiliary is accomplishing.

There being very little business to be discussed, the members enjoyed a delightful musical program rendered by Mrs. Helen Calongue and Mrs. Gabrielle Lavedan.

Mrs. S. Chaillé Jamison, Past President, and Mrs. W. P. Gardiner, President-Elect, presided at the very prettily decorated tea-table.

Mrs. Ralph Christman,  
Chairman, Press & Publicity.

# CADDO PARISH

Shreveport, La.

President—Mrs. F. G. Ellis, 4624 Fairfield.

President-Elect—Mrs. R. T. Lucas, 535 Broadmoor Blvd.

1st. Vice-President—Mrs. J. T. Crebbin, 1133 Kinshway.

2nd. Vice-President—Mrs. B. C. Garrett, 924 Monrovis.

Recording Secretary—Mrs. C. B. Webb, 601 Oakley Drive.

Corresponding Secretary—Mrs. W. B. Allums, 1128 Janther Place.

Treasurer—Mrs. J. E. Knighton, Jr., 650 Oneonta.

Parliamentarian—Mrs. C. P. Ruthledge, 4334 Richmond.

Press and Publicity—Mrs. Johnson R. Anderson, 148 East Jordan.

Meets second Wednesday of each month.

The first meeting of the 1935-36 year of the Woman's Auxiliary of the Shreveport Medical Society, which was a musical tea, was held on October 9. This very lovely affair was held at the home of the President, Mrs. F. G. Ellis. Mrs. Ellis spoke very encouragingly and enthusiastically to the sixty members who were present.

The work at the Pines Preventorium, which is the major project of this auxiliary has been carried on through the summer and sixteen children can now be taken care of.

Mrs. Johnson R. Anderson,  
Chairman, Press & Publicity

# CALCASIEU PARISH

Lake Charles, La.

President—Mrs. S. F. Hatchette.

President-Elect—Mrs. L. Z. Kushner.

1st. Vice-President—Mrs. G. C. McKinney.

2nd. Vice-President—Mrs. R. Marshall.

Recording Secretary—Mrs. Ben Goldsmith.

Treasurer—Mrs. Beneth Sewell.

Meets third Friday of each month.

# OUACHITA PARISH

Monroe, La.

President—Mrs. J. T. Graves.

1st. Vice-President—Mrs. C. P. Gray.

2nd. Vice-President—Mrs. W. L. Bendel.

Recording Secretary—Mrs. L. L. Shlenker.

Corresponding Secretary—Mrs. I. J. Wolff.

Treasurer—Mrs. A. D. Tisdale.

Historian—Mrs. C. H. Hill.

Parliamentarian—Mrs. P. L. Perot.

Publicity Chairman—Mrs. D. T. Milam.

Meets third Wednesday of each month.

# JEFFERSON DAVIS PARISH

Jennings, La.

President—Mrs. R. R. Arceneaux, Welsh.

Vice-President—Mrs. L. E. Shirley, Jennings.

Recording Secretary—Mrs. L. E. Shirley, Jennings.

Corresponding Secretary—Mrs. C. A. Martin, Welsh.

Treasurer—Mrs. F. W. Harrell, Jennings.

Press and Publicity—Mrs. C. A. Martin, Welsh.

Meets second Tuesday of each month.

## CLAIBORNE PARISH

Homer, La.

President—Mrs. M. J. Rivenbark, Haynesville.

Vice-President—Mrs. J. E. Batchelor, Haynesville.

Secretary-Treasurer—Mrs. H. R. Marlatt, Homer.

Meets second Friday of every other month.

## MISSISSIPPI STATE MEDICAL ASSOCIATION NEWS

## MEMBERSHIP

Officers of the Medical Societies of Mississippi:  
My Dear Doctors:

I wish to call your attention to an article in the Mississippi News Section of the New Orleans Medical and Surgical Journal for October, from Dr. Lippincott. This article contains a compilation of figures showing the members and the eligible doctors for membership in the State Medical Association.

I am sure that you will agree with me that this is an alarming condition so far as organized medicine is concerned. The by-laws of the Mississippi State Medical Association makes it the duty of the president-elect to put on a membership drive. I feel like if we will get busy right now and put this drive on in earnest, we can increase our membership at least twenty-five or thirty per cent.

I am going to propose for your consideration this plan: Immediately, have your medical society to appoint a membership campaign committee, composed of at least two members from each county in your society and then let the members of this committee call in such other men as they may desire to help them to go out after the Brother who is eligible, for membership. Let's make it a personal campaign, similar to the one put on in church drives and political campaigns. I have already started this campaign in the Central Medical Society. The committee has been appointed and we are going to call a meeting of this committee and start the drive right away. We are promising those who come in now, to give them a receipt as of December, for dues to the county and state for 1936. I would suggest that you do the same.

Suppose we have a little competitive contest. Let's see who can gain the greatest percentage of new members. What do you say? The fight is on! Let's go!

Sincerely yours,

Harvey F. Garrison, President-Elect,  
Mississippi State Medical Association.

## DIRECTORY AND CALENDAR

## MEDICAL SOCIETIES

(Information is not complete. Secretaries of societies are urged to send in full data so that it may be known when the societies of the state meet and who are the officers directing their activities this year).

Adams County Medical Society: E. E. Enoist,

Natchez, president; W. K. Stowers, Natchez, secretary. Meets third Tuesday each month, Natchez Hospital, 7:30 P. M.

Amite County Medical Society: C. W. Stewart, Osyka, president; D. H. Thornhill, Crosby, secretary. Meets with Wilkinson County Medical Society, second Thursday each month except January, April, July and October, Field Memorial Hospital, Centerville, 6:00 P. M.

Central Medical Society: W. B. Dobson, Jackson, president; L. W. Long, Jackson, secretary. Meets first Tuesday each month, Robert E. Lee Hotel Roof, Jackson, 6:30 P. M.

Claiborne County Medical Society: E. P. Jones, Hermanville, president; G. W. Acker, Port Gibson, secretary.

Clarksdale and Six Counties Medical Society: J. L. Nichols, Alligator, president; N. C. Knight, Clarksdale, secretary. Meets fourth Wednesday in March and second Wednesday in November. Elks Club, Clarksdale, 2 P. M.

Clarke-Wayne Counties Medical Society: W. P. Gray, Waynesboro, president; Albert Hand, Shubuta, secretary.

Delta Medical Society: P. G. Gamble, Greenville, president; F. M. Acree, Greenville, secretary. Meets second Wednesday of April and October, rotates through five counties, 2 P. M.

DeSoto County Medical Society: A. J. Weisinger, Hernanda, president; L. L. Minor, Rt. 4, Memphis, secretary.

East Mississippi Medical Society: H. L. Arnold, Meridian, president; L. V. Rush, Meridian, secretary.

Franklin County Medical Society: C. E. Mullin Bude, president; L. Costley, Meadville, secretary. Meets first Tuesday of January, April, July and October, Meadville, 2:00 P. M.

Hancock County Medical Society: A. P. Smith, Bay St. Louis, Secretary.

Harrison County Medical Society: G. F. Carroll, Biloxi, president; H. K. Rouse, Lyman, secretary.

Homochitto Valley Medical Society: Lucien S. Gaudet, Natchez, president; Homer A. Whittington, Natchez, secretary. Meets second Thursday of January, April, July and October.

Issaquena-Sharkey-Warren Counties Medical Society: F. Michael Smith, Vicksburg, president; Leon S. Lippincott, Vicksburg, secretary. Meets second Tuesday each month, Elks Club, Vicksburg, 7:00 P. M.

Jackson County Medical Society: J. M. Lockard, Pascagoula, president; R. G. Lander, Pascagoula,

secretary. Meets second Thursday of March, June, September and December, Jackson County Hospital, Pascagoula, 7:00 P. M.

Jefferson County Medical Society: W. T. Harper, Fayette, secretary.

Jones County Medical Society: A. J. Carter, Ellisville, president; Eugene Bush, Laurel, secretary. Meets first Thursday each month, South Mississippi Charity Hospital, Laurel, 6:30 P. M.

LeFlore County Medical Society: Meets second Monday each month, Greenwood-LeFlore Hospital, Greenwood, 8:00 P. M.

North Mississippi Medical Society: W. W. Phillips, Oxford, president; A. H. Little, Oxford, secretary.

Northeast Mississippi Thirteen Counties Medical Society: S. R. Deanes, West Point, president; A. J. Stacy, Tupelo, secretary.

Pike County Medical Society: H. L. Bauer, McComb, president; Elise Rutledge, McComb, secretary. Meets first Tuesday each month, McComb, 6:30 P. M.

South Mississippi Medical Society: J. Gould Gardner, Columbia, president; F. T. Bower, Hattiesburg, secretary. Meets second Thursday of September, December, March and June. Usually alternates Hattiesburg and Laurel, 3:00 P. M.

Stone County Medical Society: S. E. Dunlap, Wiggins, president; Earl W. Green, Wiggins, secretary. Meets with Harrison-Stone-Hancock Counties Medical Society.

Tate County Medical Society: W. D. Smith, Senatobia, president; J. Sidney Eason, Coldwater, secretary. Meets second Wednesday each month, Senatobia.

Tri-County Medical Society. H. R. Fairfax, Brookhaven, president; R. B. Zeller, Hazelhurst, secretary. Meets second Tuesday of March, Copiah-Lincoln Junior College, Wesson; June, Walthal Hotel, Tyertown; September, Riverside Hotel, Monticello; December, Whitworth College, Brookhaven, 12:30 P. M.

Wilkinson County Medical Society: S. E. Field, Centerville, president; E. M. Butler, Centerville, secretary. Meets Thursday, each month, except January, April, July and October. Field Memorial Hospital, Centerville, 6:00 P. M.

Winona District Medical Society: P. B. Brumby, Lexington, secretary.

#### MISSISSIPPI HOSPITALS

##### CALENDAR OF STAFF MEETINGS

ANDERSON INFIRMARY: Second Friday, each month, 6:00 P. M.

EILOXI HOSPITAL: First Friday, each month, 7:30 P. M.

CLARKSDALE HOSPITAL: Second Wednesday, each month, 1:30 P. M.

GEORGE C. HIXON MEMORIAL HOSPITAL: First Monday each month.

GREENWOOD LEFLORE HOSPITAL: Second Monday, each month, 8:00 P. M.

HOUSTON HOSPITAL: Last Thursday, each month, 7:30 P. M.

JACKSON COUNTY HOSPITAL: Second Thursday, each month except July and August, 7:00 P. M.

JACKSON INFIRMARY: Last Tuesday, each month, 6 P. M.

MERIDIAN SANITARIUM: Second Thursday, each month, 6:30 P. M.

MISSISSIPPI BAPTIST HOSPITAL: Third Tuesday, each month, 6:30 P. M.

NATCHEZ SANATORIUM: Second Tuesday, each month, 7:00 P. M.

NORTHEAST MISSISSIPPI HOSPITAL: First Monday, each month, 7:30 P. M.

RUSH'S INFIRMARY: Second Thursday, each month, 7:00 P. M.

SOUTH MISSISSIPPI INFIRMARY: Last Thursday, each month, 5:00 P. M.

U. S. VETERANS HOSPITAL, GULFPORT: Every Monday, Tuesday, Wednesday and Thursday, 10:45 A. M.

VICKSBURG INFIRMARY: First Wednesday, each month, 7:00 P. M.

VICKSBURG SANITARIUM: Tenth or week of the tenth, each month, 6:30 P. M.

WINONA INFIRMARY: First Thursday, each month, 7:30 P. M.

#### COMMUNITY HOSPITALS

A meeting of the Committee on Community Hospital Legislation of the Mississippi State Medical Association and of the Committees on Legislation and Community Hospitals of the Mississippi State Hospital Association was held at the Robert E. Lee Hotel, Jackson, October 10, with the following present: Dr. J. R. Hill, Corinth, president, Mississippi State Medical Association; Dr. H. A. Gamble, Greenville, president, Mississippi State Hospital Association; Dr. R. B. Caldwell, Baldwin; Dr. C. M. Speck, New Albany; Dr. E. R. Nobles, Rosedale; Dr. V. B. Philpot, Houston; Dr. M. L. Flynt, Meridian; Dr. R. W. Smith, Canton; Dr. J. Gould Gardner, Columbia; Dr. George E. Adkins, Jackson; Dr. A. B. Harvey, Tyertown; Dr. R. M. Stephenson, Lexington; Dr. F. M. Acree, Greenville; Miss Annie L. Hollum, Brookhaven; Dr. W. H. Anderson, Booneville; Dr. M. D. Ratcliff, McComb; Dr. W. H. Brandon, Clarksdale; Mrs. J. Oridge, R. N., Lexington; Mrs. E. M. Bee, Brookhaven; Dr. Leon S. Lippincott, Vicksburg. Proposed laws to provide for community hospitals and for legislation to protect hospitals were thoroughly discussed and plans of action made.

At the invitation of the State Budget Commission, the committees appeared before Hon. Alfred Stone, chairman, and R. J. Folse, executive secretary, at the State Capitol, explained the purposes



and desirability of a more equitable distribution of state funds for hospitalization of indigent sick. The committees then specifically requested that the budget commission include in the budget to be presented to the incoming legislature \$600,000 (15 cents per capita) for the biennium, to cover the entire cost to the state of hospitalization for the indigent sick. The committees were courteously received.

An executive committee to consist of the chairman and one other member from each of the three committees represented, with the presidents of the Mississippi State Medical Association and Mississippi State Hospital Association, will work out the details of the proposed legislation.



THEOPHILUS ERSKINE ROSS, M. D.

Dr. T. E. Ross was born in Philadelphia, Mississippi, February 18, 1864. His early boyhood days were spent on a farm in Sandtown, Neshoba County, and he attended the rural school near his home. His ambition to study medicine was realized in 1886 and he was graduated from the College of Physicians and Surgeons at Baltimore, Maryland, March 16, 1888. This College later was merged with the University of Maryland. He practiced medicine in his home county for four years and then moved to Hattiesburg in 1892. This same year he married Miss Dora Mars of Neshoba County, and of that union, five children are living.

Dr. Ross was at all times actively identified with the professional, civic and religious activities of Hattiesburg and the State. He was active in Masonic work and was a member of all Masonic bodies in Mississippi. He was Past Master of his home lodge. He was also a charter member of the Leaf River Camp of the Woodmen of the World, and was elected as First Counsel Commander.

At the time of his death, Dr. Ross was chairman of the Board of Deacons of the First Baptist Church and president of the Board of Trustees of the Mississippi Woman's College. This latter of-

fice he had held since Mississippi Woman's College was founded. He was also college physician during this entire period. He was instrumental in securing the location of State Teachers College in Hattiesburg, and with others, donated the site for it.

Dr. Ross was a director of the First National Bank, president of the Ross Company, and was connected with various other organizations. A pioneer in the hospital business in Hattiesburg, he opened a small institution in March, 1900. Later the Gulf and Ship Island Railroad Employees Hospital was built and operated under his supervision for several years. Ownership of the institution passed to him, he changing the name to the Hattiesburg Hospital and continued to operate that institution until 1918, when it passed into the hands of the King's Daughters. In turn, it became the property of the Methodist Conference, which razed the old building and constructed a most modern institution on the same site, known as the Methodist Hospital. He retained an active connection as visiting surgeon.

Dr. Ross was a member of the South Mississippi Medical Society, the Mississippi State Medical Association, and the American Medical Association. From 1907-08 he served as councilor from his district. He was past president of the South Mississippi Medical Society and was president of the Mississippi State Medical Association for 1926-27. He served as delegate to the American Medical Association in 1927. He also served as a member of the Mississippi State Board of Health from 1908 to 1916. He was a Fellow of the American College of Surgeons from 1914 to his death.

He was for many years chief surgeon of the Gulf and Ship Island Railroad Company and chief surgeon for the Mississippi Central Railroad Company from its organization. He was also chief surgeon of the Bonhomie & Hattiesburg Southern Railroad Company, surgeon for the Newman Lumber Company from its organization and for the Hercules Powder Company since its entry into Mississippi.

Dr. Ross died at his home on the morning of September 29, 1935, after a terminal illness of two months. He was seventy-one years of age.

#### DEATHS OF MISSISSIPPI PHYSICIANS

- Dr. B. F. Hand, Waynesboro, September.
- Dr. T. E. Ross, Sr., Hattiesburg, September.
- Dr. L. S. Pearce, Falkner, September.
- Dr. Julius Crisler, Jackson, September.
- Dr. T. D. Hall, Saulsberry, Tennessee, (formerly of Raymond).

#### STATE BOARD OF HEALTH

On September 21, Dr. Underwood addressed the Washington County Health Council on the sub-

ject of "Possibilities and Responsibility for Health." This organization is composed of interested citizens in the county whose work it is to promote public health activities. Many of the counties having full-time health departments have active health councils which are of inestimable assistance.

On September 24, Dr. Underwood spoke to the Lions Club at Tupelo.

The State Tuberculosis Association held its annual state-wide meeting at the Robert E. Lee Hotel, Jackson, September 25.

On September 29, Dr. Underwood spoke at the Warren Memorial Church, Louisville, Kentucky. There were 1500 in attendance. This is a meeting preliminary to the Kentucky State Medical Association which begins September 30. Dr. Philip Barbour of the League of Christian Physicians invited Dr. Underwood to make the annual address. While in Kentucky, Dr. Underwood will remain for the meeting of the State Medical Association and visit some of the counties carrying on public health programs of special interest.

Jose Aguero, young administrator of the central health offices of Cuba, visiting Jackson to study the organization and program of the Mississippi State Board of Health said before leaving that he would be able to introduce sanitation into the Cuban homes, but screening never. Although Cuba is noted for the size of its mosquitoes, and although there are annually about 10,000 cases of malaria on the island, the people will not tolerate screens, he said.

Mr. Aguero, who was brought to the States through the cooperation of the Rockefeller Foundation, spent a week in Mississippi. Mississippi and Cuban health problems are quite similar—especially the typhoid and malaria problems.

On September 28, Dr. Felix J. Underwood received notice from the Department of State, Washington, that President Roosevelt had appointed him as a delegate from the United States to the Seventh Pan American Child Congress to be held in Mexico City from October 12 through the 19. Dr. Underwood will speak to the Congress on the subject: "*The Organization of Rural Child Health Service.*" The talk had already been submitted as requested for translation into two other languages.

#### DEAFNESS

Dr. Felix J. Underwood, executive officer, Mississippi State Board of Health has called the attention of the doctors of the State to an interesting item that appeared in the news magazine "TIME" under date of March 11, 1935. It follows:

#### QUININE AND DEAFNESS

Of the 10,000,000 deaf people in the U. S., 3,000,000 are children. Of the 3,000,000 deaf children, almost 2,000,000 were born deaf. In the South twice as many congenitally deaf children are born

in the last six months of a year as are born in the first six months.

In the second half of each year malaria is rife in the South. Quinine is the specific drug which victims of malaria take to combat that distressing disease. And quinine has a special destructive effect on the auditory nerves.

Therefore, is it possible that quinine, seeping into the blood of the fetus when a pregnant woman with malaria doses herself, is responsible for the major part of the congenital deafness in the U. S.?

Last week Otologist Hermon Marshall Taylor of Jacksonville, Fla., president of the Southern Medical Association, resoundingly declared that this malaria-quinine-deafness sequence was a fact. And in a Southern Medical Journal article he gave this strong advice to the ear specialists of the nation:

"That the otologist has practically ignored the possible significance of prenatal medication in infant deafness may be due to the difficulty of early diagnosis. A child must be 2½ to 3 years old before a diagnosis of nerve deafness can be made and by that time the prenatal history has generally been dismissed. The usual history consists principally of whether or not there has been a family history of deafness, consanguinity, hereditary syphilis or meningitis. It seems, however, that inquiry regarding the drugs given the mother during pregnancy may yield information quite as important as whether the patient had a great uncle or a second cousin who was deaf. If a large number of otologists will in future, when dealing with cases of children with nerve deafness, be careful to include in the usual questionnaire the history of drugs administered to the mother during pregnancy, there may in due time be collected sufficient data to establish prenatal medication as an etiologic factor in such cases as come under the broad classification of congenital deafness."

#### TUBERCULOSIS ABSTRACTS

##### NATIONAL TUBERCULOSIS ASSOCIATION

The general practitioner is often in doubt as to whether a given case of tuberculosis would benefit by surgery and if so, what particular procedure to advise. Each case, of course, requires individual judgment, but it is only by studying the outcome of a large number of cases that a general appraisal of the several surgical procedures can be made.

##### RESULT OF SURGICAL TREATMENT

Surgical treatment of pulmonary tuberculosis includes all forms of mechanical collapse with the exception of that produced by pneumothorax. Other forms of surgical treatment still in the experimental stage are not considered in this study.

In trying to evaluate results of surgical treatment for pulmonary tuberculosis a diversity of

variable factors may vitiate the significance of comparative statistics; for example, none of the various surgical procedures can be said to be standardized with respect to their technical aspects, the indications for the different procedures vary greatly and the time element is important. Nevertheless the statistics compiled as in any other field of clinical medicine, furnish a perspective and means of plotting the course of future trends.

The study is based on the author's experience with a series of 200 thoracoplasty cases, and on 4,535 from the literature. Statistical tables in the article support the author's summary, which is as follows:

#### THORACOPLASTY

From one-quarter to nearly one-half the deaths following thoracoplasty within a period of five to ten years occur within the first eight weeks. The author's mortality in this period was 10.3 per cent; the combined mortality among 2,810 cases was 10.5 per cent. The individual variations among the series were from 3 to 20 per cent. The most frequent cause of death in the author's experience was cardiac failure and pulmonary complications. In a combined group of 230 deaths, death was reported to have been due to shock in 8 per cent, heart failure in 18 per cent, and pulmonary complications or extension of tuberculosis in 34 per cent. The mortality rate decreases progressively after the first few weeks. From one-half to two-thirds die during the first 6 months.

Among 3,762 patients followed for from one to twelve years after operation, 35.3 per cent were symptom—and bacillus—free and were able to work; 22.1 per cent were improved and able to do some work; 5.5 per cent were not improved or were made worse by the operation; 3.5 per cent were not traced; and 33.6 per cent were dead at the time of the report. A large proportion of the patients are rehabilitated to the extent that they are able to return to their former stations in life and to resume their former occupation or activities. Many women marry, and there is record of 22 who have borne children since their operation, usually against advice.

The variation in extent of partial thoracoplasty and relatively limited number of any one type followed for one or more years make any estimate of enduring results from them inconclusive. Among 236 collected cases followed for two years or more, 87.5 per cent were living, and 12.5 per cent were dead. Of the living, 53.4 per cent were reported as clinically well; of the deaths one-half occurred during the first eight weeks after operation.

#### PNEUMOLYSIS AND PLOMBAGE

Of 307 cases observed during several months to several years, 53.4 per cent were improved, and 44.3 per cent were dead. Of the deaths, 40 per

cent occurred during the first 8 weeks after operation.

#### PHRENICOEXAIRESIS AS AN INDEPENDENT PROCEDURE

This operation is performed for such a variety of indications and the chance of later recurrence of the disease following so limited a collapse is so considerable that prolonged observation of the patients in any one group will be necessary for a determination of late results. The result so far reported are conflicting, but a considerable number of enduring clinical cures are recorded.

A combination of methods has extended indications to include cases with bilateral lesions and has improved results.

#### CONCLUSIONS

The surgical treatment of pulmonary tuberculosis offers to properly selected patients not suitable for pneumothorax therapy the best if not the only prospect of a complete arrest of the disease and, when that cannot be achieved, a relief of symptoms and prolongation of life.

The proper selection of the patients and of methods and of the most opportune time for operation demands the closest collaboration of the phthisiotherapist and surgeon.

From one-quarter to one-half of the total deaths during the first ten years following thoracoplasty occur during the first 8 weeks and death is due largely to shock, cardiac failure, and pulmonary complications, all in considerable measure preventable through preoperative preparation, through operation graded into stages according to the patient's condition, and watchful prolonged post-operative supervision. Such measures will extend indications for operation. Even though by doing so the total mortality is not reduced, more patients otherwise hopeless are given the chances it affords.

Deaths after the first 8 weeks are due largely to extension of the tuberculosis, in some measure preventable through primary adequate collapse, through secondary additional collapse or compression for recurrence, and through reasonable care of the health.

Adequate application of the method or combination of methods indicated, early in the disease before extensive destructive changes in the lung and before secondary visceral damage has occurred, will result in a minimal mortality, a maximal conservation of respiration function, and in the greatest possible measure of rehabilitation.

#### SICKNESS INSURANCE

In an article, "Medical Economics—The Coordination of Resources for Medical Care in the District of Columbia," recently issued by the Medical Society of the District of Columbia, under the heading of "The Evils of Sickness Insurance," appears quotations from a masterly article on the subject by Gustav Hartz, eminent German labor



economist. In the present clamor for sickness insurance the observations are worthy of special study and thought and discussion by every Mississippi physician. The quotations follow:

"The unevenness in the business level, the seasons, holidays, a change of work, failing health and many other things contribute to bring about a noticeable change in morbidity. Since the sickness insurance has been in effect, the average number of days of incapacity to work owing to ill-health has risen from  $5\frac{1}{2}$  to 28 days, although health in general has considerably improved. In the strict sense of the word sickness insurance is no insurance. From a technical and mathematical standpoint it is also quite unsettled in view of the moral hazard.

"This is clearly seen when considering that the individual insurance case, whether due to illness or unemployment, can be willfully caused or extended. Where is the border line between illness and health, between mere indisposition and illness, between dread of getting ill and bluff? And if the insured person is really ill, where is the border line between ability or disability to work? How can the duration of an illness be fixed?

"Illness is the most incalculable risk in existence.

"Even the doctor is mostly or at least frequently, unable to diagnose correctly and to distinguish pretenders and hypochondriacs from really sick people, or rather to tell whether a man is fit to work or not.

"Dread of illness obsesses most people, and this has been pressed into a system 'illness made easy' by which the will to be well is strangled. The doctor is consulted a dozen times where once would be sufficient—the insurance pays. The prescribing of medicine, bandages, etc., is desired. When they have been doing things they lie about until they are no longer fit to be used and must be thrown away—the insurance pays. Besides, it is nice to get something in return for the premiums paid year in and year out. Excessive "overdoctoring" is the result, and fear of illness shakes the will for recovery—the best aid to health. Pretenders and hypochondriacs are bred, and the use of medicine becomes excessive. The advertising of certain remedies and cures created a medicine craze. A few years ago it was ascertained that 4 times as much money was used for doctors' fees and medicines for 35,000,000 of people in insurance as for 30,000,000 of uninsured. This was stimulated unthinkingly by a desire to get insurance money. An actual run on the sickness insurance allowance set in.

"At first sight it seems improbably and paradoxical that a desire to obtain insurance money that scarcely amounts to half the sum of wages should arise. It appears impossible that someone should, unless compelled by illness, forfeit his wages to get an allowance of half the amount. Unfortunately, life does not run a straight course between

health, working ability, working possibilities on one hand, and illness and disability on the other, nor do people's minds and actions.

"In millions of cases, for example, when wages are being decreased, when work is scarce and work hours in consequence shortened, when there are fewer shifts, many holidays, work restrictions at certain seasons, outdoor work in frosty weather, 50 per cent of the wages is welcome. One objects to the work he is given, another does not feel like working, a third's time is taken up by some family matter for which he would have to take leave of absence and forfeit his pay. In such cases the sickness insurance comes in handy. Besides this, there is also deceitful trickery. Fictitious contracts are made, doctors are induced to prescribe medicine, and instead of the medicine, toilet soap and scent, etc., are handed out by the pharmacies.

"How can this possibly be done, some ask? Those who consult doctors are supposed to be ill. That is all very well if the doctors were always able to detect whether the statements of the patients were correct. Often a diagnosis is impossible. He who would like to prove this should go to 10 doctors, complain of headache, pain in the limbs, rheumatism. All 10 will start a treatment for headache or rheumatism, without discovering that nothing whatever is the matter with the patient.

"Besides that, all doctors are glad to get new patients, for do they not mean their livelihood?

"Medical science has become a cheap article, and doctors have given up conscientious treatment. The genuine patient is neglected, is not given the necessary care.

"The greater the mass consultations, the lower are the doctor's fees. The amounts paid to panel doctors for each single case are deplorable. They are, therefore, compelled to resort to mass practice.

"The sickness insurance unrolls the entire problem of the medical man's existence. Mass demand compelled a limitation in the use of medicines. Doctors must not prescribe what they consider good for the patient, they only being allowed to give remedies entered in a book of medical regulations for insurance purposes.

"The insured workman becomes a second-class patient.

"The genuine patient is justly indignant to find that the existence of his illness is doubted, and that he who has always paid his premiums regularly and has a right to demand conscientious attendance, is considered a cheat.

"This system, together with the rest of the bureaucratic apparatus, has wedged itself between doctor and patient, completely destroying the patient's confidence in his physician, which greatly retards all recovery."



## ADAMS COUNTY MEDICAL SOCIETY

The regular monthly meeting of the Adams County Medical Society was held September 17, at the Natchez Charity Hospital with nine members in attendance.

Dr. R. D. Sessions read a very interesting paper on "Pancreatic Cysts and Pancreatic Abscess" with report of a case. Dr. L. S. Gaudet presented a case of central scotoma.

W. K. Stowers,  
Secretary.

## CENTRAL MEDICAL SOCIETY

The regular monthly meeting of the Central Society was held Tuesday night, October 1, at 6:30 o'clock at the Robert E. Lee Hotel. A meeting of the Executive Committee at 6:00 o'clock in the Board of Directors' room preceded the dinner.

The program committee met after the regular session.

A program with several important subjects and case discussions was presented to a full attendance and several visitors. Among these visiting doctors we had Dr. Hill, president of the Mississippi State Medical Association.

Dr. H. F. Garrison, Sr. delivered a case report on "Purpura Hemorrhagica" followed by discussions by Drs. D. W. Jones, H. F. Garrison, Jr., G. W. Owen, and H. R. Shands.

A case report on "Cerebellar-Pontine Angle Tumor" was given by Dr. Lee Lipscomb, Jr., followed by discussions by Drs. S. Van Dyke Hagaman, and A. G. Wilde.

Dr. H. R. Shands delivered a paper on "New Therapeutic Procedures Recently Observed," which was very interesting and illuminating.

Dr. R. B. McLean gave a brief and interesting case report with presentation of a patient on "Aneurysm of the Femoral Artery, Treated by Obliterative Endo-Aneurysmorrhaphy."

Dr. Garrison stressed the importance of the membership for the coming year and committees were selected to aid in increasing the membership.

Dr. Noblin brought the meeting to a close with a brief talk on "Control of Tuberculosis in the White Race Contracted From Our Domestic Servants."

L. W. Long,  
Secretary.

## DELTA MEDICAL SOCIETY

SEMI-ANNUAL MEETING, OCTOBER 9, JUNIOR COLLEGE, MOOREHEAD PROGRAM

Meeting called to order at 2:00 P. M. by the president, Dr. P. G. Gamble.

Business Session.

Scientific Session:

Comatose Malaria.—Dr. W. S. Taylor, Isola.

Malaria.—Dr. I. I. Pogue, Scott.

Hydatiform Mole, with case report.—Dr. W. B. Dickens, Greenwood.

The Relationship of the County Health Officer to his Community.—Dr. H. B. Cottrell, Indianola.

The Changes in the Eye Grounds in Systemic Disease.—Dr. L. C. Davis, Greenville.

Treatment of Fibroid Tumors.—Dr. Carl Crutchfield, Nashville, Tenn.

Social: 7 P. M., Barbecue at 4 Mile Lake.

F. M. Acree, Greenville,  
Secretary.

## HOMOCHITTO VALLEY MEDICAL SOCIETY

The third quarterly meeting of the Homochitto Valley Medical Society was held in Natchez, Thursday, October 10. The following officers were elected for 1936:

President, Dr. Lucien S. Gaudet, Natchez.

Vice-President, Dr. Francis Dixon, Adams County.

Vice-President, Dr. W. R. Brumfield, Amite County.

Vice-President, Dr. C. E. Mullins, Franklin County.

Vice-President, Dr. W. T. Harper, Jefferson County.

Vice-President, Dr. C. E. Catchings, Wilkinson County.

Secretary-Treasurer, Dr. Homer A. Whittington, Natchez.

Two very interesting papers were presented:

Dr. J. S. Ullman, Menstruation and the Hormones.

Dr. H. A. Whittington, Essential Hypertension.

Both papers were freely discussed by the physicians present.

Lucien S. Gaudet.

## ISSAQUENA-SHARKEY-WARREN COUNTIES MEDICAL SOCIETY

A regular monthly meeting of the Issaquena-Sharkey-Warren Counties Medical Society was held at the Elks Club, Vicksburg, Tuesday, October 8. After a supper served at 7 P. M., the meeting was called to order by the president, Dr. F. M. Smith, with seventeen members and two guests present.

A committee of graduate nurses of Vicksburg appeared before the Society to ask cooperation in securing the 1936 meeting of the Mississippi State Nurses Association for Vicksburg. The Society voted to extend an invitation for the meeting and to aid in every way possible.

Scientific program:

Radiology: Dr. G. M. Street.

1. The Physician's Daily Obligation to Educate the Public About Cancer.—Dr. J. A. Beals, Greenville.

Discussed by Drs. N. B. Lewis, B. B. Martin, Jr., L. S. Lippincott, W. K. Purks, and G. M. Street. Dr. Beals closed.

2. Improved Methods in Roentgen Therapy of Malignant Diseases.—Dr. A. Street (Read by Dr. G. M. Street).

Discussed by Drs. Beals and W. E. Johnston. Dr. G. M. Street closed.

3. Diagnosis in Some Common Joint Conditions.—Dr. W. E. Johnston.

Discussed by Drs. W. C. Pool and R. A. Street, Jr. Dr. Johnston closed.

The Committee on Public Health and Legislation reported on resolutions having to do with malpractice suits as adopted by the General Medical Society, and presented substitute resolutions. The substitute resolutions were tabled for study and consideration at the next meeting.

The matter of mosquito eradication was discussed and the committee on malaria consisting of Drs. B. E. Martin, S. W. Johnston, and L. S. Lippincott was continued.

It was reported that at the request of the Society the Woman's Auxiliary to this Society had appointed a committee on Malaria, consisting of Mrs. B. B. Martin, Mrs. F. M. Smith and Mrs. D. A. Pettit, to cooperate with the general committee.

The by-laws of the society were amended as regards the reinstatement of former members dropped for non-payment of dues.

Plans were made for the annual meeting on December 10.

A letter was read from Dr. Harvey F. Garrison, president-elect of the Mississippi State Medical Association and in charge of organization, asking for the appointment of a committee to consist of two members from each county represented in the Society to secure the membership of all eligible physicians. The president appointed this committee as follows: Issaquent County, Drs. W. H. Scudder and T. W. Huey; Sharkey County, Drs. H. S. Goodman and W. A. Smith; from Warren County, Drs. H. H. Johnston and B. B. Martin, Jr.

The next meeting of the Society will be held on November 12. The subject will be Internal Medicine and the committee in charge consists of Drs. W. K. Purks, L. J. Clark, W. E. Johnston, H. S. Goodman and W. H. Scudder. The program as prepared will be as follows:

1. A Comparison of the Gross Anatomical Changes of Rheumatic Heart Disease With Those Found in Other Forms of Heart Disease.—Dr. R. H. Potts, New Orleans.

Discussion opened by Drs. L. S. Lippincott and W. P. Robert.

2. The General Management of Rheumatic Heart Disease.—Dr. L. J. Clark, Vicksburg.

Discussion opened by Drs. P. S. Herring and W. E. Johnston.

3. Some Special Problems of the Diagnosis and Treatment of Rheumatic Heart Disease.—Dr. W. K. Purks, Vicksburg.

Discussion opened by Drs. L. J. Clark and W. H. Parsons.

#### NORTH MISSISSIPPI MEDICAL SOCIETY

A quarterly meeting of the North Mississippi Medical Society was held at Oxford, October 18 at the Graduate Building, University of Mississippi, beginning at 2:00 P. M.

The program included:

1. Invocation.—Rev. John Stephens.

2. Minutes of Preceding Meeting and Other Business.

3. The Management of the Patient with Heart Failure.—Dr. Otis S. Warr, Memphis, Tenn.

4. Some Aids in Kidney Disease.—Dr. Leon S. Lippincott, Vicksburg.

5. Football Injuries of the Knee.—Dr. Willis Campbell, Memphis, Tenn.

Dr. W. W. Phillips, Oxford, president, presided.

Included in those attending were doctors from the DeSoto and Tate County Medical Societies and medical students from the University of Mississippi Medical School. Dr. J. G. Gardner, Columbia, president of the South Mississippi Medical Society was a guest. A number of doctors from over the state having sons and daughters attending the University took this occasion to attend a medical society meeting while in Oxford attending the "Home Coming" exercises at "Ole Miss," October 19.

A. H. Little,  
Secretary.

#### SOUTH MISSISSIPPI MEDICAL SOCIETY

The South Mississippi Medical Society may justifiably regard with pride the scientific programs of its recent meetings. Teeming with interest and laden with medical knowledge the essays and discussions have been of incomparable excellence. Undoubtedly, the best of all these programs was the last, held at Columbia. Dr. Gardiner, the president of this society was host and arranged for and directed this meeting. We were most highly honored with the presence of the governor-elect of this state and by the mayor of Columbia. Our gratitude to Dr. Gardiner can hardly be estimated.

It is with deepest regret that I mention the passing of undoubtedly the most prominent member of our society. Dr. T. E. Ross has stood for many years as one of the medical landmarks of this part of the state. Always standing for the best in medical achievement and progress he has been a pillar of professional accomplishment. It is hard and will ever be, for his host of friends to reconcile themselves to his absence, but, indeed his spirit will be with us, an example of steadfastness and courage in our difficult work of carrying on in our profession.

F. T. Bower,  
Secretary.

## WILKINSON COUNTY MEDICAL SOCIETY

The Wilkinson County Medical Society has been organized, its membership including all the doctors of Wilkinson County, Dr. J. W. Brandon, Woodville, Dr. C. E. Catchings, Woodville, Dr. R. J. Field, Centreville, Dr. S. E. Field, Centreville, Dr. G. H. Butler, Centreville, and Dr. Edwin M. Butler, Centreville. The officers are: Dr. S. E. Field, president; Dr. J. W. Brandon, vice-president; and Dr. Edwin M. Butler, secretary and treasurer.

The meetings will be held at the Field Memorial Hospital, Centreville, at six P. M., on the second Thursday of each month—except in the months of January, April, July, and October. In these months, there will be no local meetings, as the members will meet with the Homochitto Valley Medical Society.

It is contemplated that, beginning with our next meeting, the Amite County Medical Society will meet in conjunction with the Wilkinson County Medical Society—the aim being to make our meetings more interesting and instructive by having a larger number meeting together to discuss our local problems.

Edwin M. Butler,  
Secretary.

## ADAMS COUNTY

I have nothing much to offer for next issue of the Journal, as nothing but the usual routine is going on from day to day.

We are anticipating a nice meeting of the Homochitto Valley Medical Society in Natchez, October 19, with a program on which will be two good papers.

Dr. W. K. Stowers took over the management of Natchez Hospital, as superintendent, September 15.

Dr. and Mrs. Francis Dixon have returned from their honeymoon, and are nicely located in their new home on Clifton Heights.

So long until we get some news.

Lucien S. Gaudet.

## CHICKASAW COUNTY

Doctors from this county attending the Northeast Mississippi Thirteen Counties Medical Society quarterly meeting at Greenwood Springs Hotel, Monroe County, included Drs. Hood, Guinn, Baugh, Williams, and Philpot.

Dr. W. C. Walker of Houlika was called to Memphis September 17 on account of the serious illness of his granddaughter.

Dr. and Mrs. V. E. Philpot and family spent a week's vacation recently on the Mississippi Gulf Coast.

Dr. Q. Edward Gatlin representing the Committee on Post-graduate Instruction of the State Board of Health was a visitor in this county recently for the purpose of organizing a post-graduate course in obstetrics. The course will be held at Houston

and is designed to serve the physicians of Chickasaw, Choctaw, Calhoun, and Webster counties as well as those of other nearby counties who find it convenient to attend. The course begins at 2:00 P. M.; every other day, the first session being on Monday, November 4.

The physicians of this district feel themselves fortunate to have this postgraduate instruction, the equal of any available anywhere, by Dr. Lapham of the University of Pennsylvania, Philadelphia.

The monthly staff meeting of the Houston Hospital was held on the evening of September 26. Following a delightful meal, Dr. J. Rice Williams gave a paper, "A Few Points about Cancer", and Mr. Q. Edward Gatlin gave an address on the proposed postgraduate course in obstetrics sponsored by the State Board of Health, the Mississippi State Medical Association, Tulane University Graduate School of Medicine, and the Commonwealth fund of New York.

Dr. Sid Evans, dean of Chickasaw County physicians, is confined to his bed with a severe cold. Doctor Evans, who is 78 years of age, began the practice of medicine in Houston in 1880. He typifies the beloved family physician and is still in active practice where he began 55 years ago.

W. C. Walker,  
(Per Douglas D. Baugh).

## COAHOMA COUNTY

Dr. E. LeRoy Wilkins has just returned from the American Legion Convention in St. Louis. He reports a fine time was had by all. Dr. Wilkins will also be feature speaker on the American Legion convention program in Indianola, October 9.

Dr. I. W. Barrett was a business visitor in Memphis recently, where it is said that he attended strictly to business.

Dr. T. M. Dye has been out in the woods giving the squirrels "fits" several times since the first of October. He apparently is well versed in the science of squirrel hunting.

Dr. W. S. Slaughter attended the Cotton Carnival recently held in Clarksdale, and he didn't miss a thing, that was going on.

Dr. I. P. Carr, prominent Clarksdale physician, showed us how it was done by putting on one of the most outstanding dog shows ever held in the State of Mississippi in conjunction with the Cotton Carnival. Dr. Carr is president of the North Mississippi Kennel Club.

Dr. N. C. Knight, director of the Health Department, was a business visitor to Jackson, during the month.

Miss Josephine Porter, Como, has been added to the staff of the Health Department as dental hygienist for the next six months.

Visitors to the Health Department during the month included Dr. Parker, Mr. Ed Johnson, Mr. Ledbetter, Miss Gladys Eyrich, Miss Ora E. Phil-



lips, of the State Board of Health, and Dr. T. Paul Haney, Jr. and Mrs. Ella M. Sayles of the Pike County Health Department at McComb.

Dr. S. D. Robinson and other physicians of this county are planning to attend the meeting of the Delta Medical Society in Moorhead, October 9.

Dr. D. H. Raney, Mattson, and Mrs. Raney visited relatives in Meridian during September.

It grieves me very much to have to report the death of one of our fellow-workers, Dr. J. W. Lockhart, who was located at Sherard. Dr. Lockhart spent the last few months with his children in Greenville and died there October 5.

N. C. Knight.

#### DESOTO COUNTY

Dr. William F. Rhodes, Capleville, Tenn., died September 25, 1935, at the home of his brother, Dr. J. A. Rhodes, Horn Lake.

Dr. Rhodes was born in Guntown, February 22, 1878. He was a man of integrity and was respected by all who knew him. He at one time practiced medicine at Wall, Savage and Horn Lake, but for past fifteen years has been located at Capleville. A good part of his clientele was from this county. Dr. Rhodes was a member of the Masonic Order.

He is survived by three brothers and three sisters. Two of his brothers are Drs. J. A. Rhodes, Horn Lake and Dr. M. B. Rhodes, Guntown. His many friends extend their sympathy to his bereaved brothers and sisters.

Dr. Richard Clinton Bunting, nationally known neurologists and for twenty-one years one of the most eminent members of the Medical profession in Memphis, died at his home, October 1, 1935.

The malady which proved fatal first attacked Dr. Bunting last April. Six weeks ago his condition became serious and a month ago he was taken on a special train to Johns Hopkins Hospital, Baltimore. Following treatment and surgery there he was brought back home. Despite an immediate rally, Dr. Bunting's strength failed after his return. Carcinoma was given as cause of death.

Dr. Bunting was a gentleman and ranked high in his profession. He was familiar to those who attended the Mid-South Medical Assembly.

When a physician takes a vacation his medical friend who looks after his patients in his absence often resents being called the 'assistant.' The relieving doctor would prefer to be known as colleague or coadjutor or substitute. An old lady recently added a new synonym when she announced that she was being treated by her own physician's 'accomplice'.

Drs. D. C. Funderburke, Olive Branch, and J. M. Wright, Hernando, report being busy in their work and collections are fair with the prospects brighter.

In the last issue of the Journal in the Mississippi State Medical Association news under the head

of Membership, DeSoto county is listed with 12 eligible and eight members. The last statement is correct but we have only 10 eligible which gives an 80 per cent membership. Prior to two months ago there were two worthy men who were M. D's. but who have not practiced in many years—altogether ineligible.

A similar condition exists in Tate County as it does in the North Mississippi Medical Society.

However, we will exert every effort to make the Second Councillor District the first in membership and in matters that relate to our State Association and organized medicine.

L. L. Minor.

#### FRANKLIN COUNTY

The doctors of Franklin County met October 1 in their regular quarterly meeting, at the office of Dr. C. E. Mullins, Bude. Those present were: Mullins and McGehee of Bude, Costley of Meadville, and Towns of Quantin.

Officers for 1936 were elected as follows:

C. E. Mullin, Bude, president.

J. C. McGehee, Bude, vice-president.

L. Costley, Meadville, secretary and treasurer.

S. R. Towns, Quantin, was elected delegate to the State Medical Association.

After serving several years as superintendent and chief surgeon for the Charity Hospital at Natchez, Dr. C. A. Everett has returned to Bude where he expects to resume his practice.

S. R. Towns.

#### HINDS COUNTY

The Central Medical Society is putting on an active drive for new members. We hope to bring the boys in.

Dr. J. R. Hill, president of the Mississippi State Medical Association, is in Jackson attending the Legislature and was a welcome guest at the meeting of the Central Medical Society.

We are welcoming two new ear, nose and throat specialists. Dr. Dobson's associate, Dr. F. D. Hollowell, is a native of Yazoo City; A. B., Mississippi College; M. D., University of Virginia; interned at New York, Postgraduate. Dr. Norman Applewhite, the son of the late Dr. Applewhite of Jackson, was formerly associated with the late Dr. Lynch of New Orleans. He has opened offices in the Standard Life Building. Dr. Applewhite's work is confined to ear, eye, nose, and throat and bronchoscopy. He had extensive training in New Orleans.

Dr. T. E. Wilson has returned from Boston where he spent a month visiting in hospitals and making special studies on heart disease.

Drs. Hand, Long and Wilson have just returned from a fishing trip to Eagle Lake. We hear that they had a great time and really had good luck.



Dr. H. R. Shands is back in active practice. He spent the summer visiting various clinics and medical centers in the east.

Dr. and Mrs. J. P. Wall have just returned from an extended tour of Europe, visiting the International Physiological Congress in Leningrad, Russia. Dr. Wall states that Jackson's capitol street looks better than anything he has seen in a long time.

Harvey F. Garrison, Jr.

#### ISSAQUENA COUNTY

The scribe from Issaquena has been taking another vacation. This time, instead of roaming the plains of Texas he has been hunting squirrels in the piney woods of southeast Mississippi. He proved himself a sort of Jonah at this sport, and bagged nothing.

After two or three days he drifted on down to the coast. There he went fishing in Back Bay off Biloxi and Ocean Springs. In consequence he has a fish story to relate. One morning three of us set out in a small bateau and cast anchor on the fishing grounds above the L. & N. Railroad bridge.

They bit fine, and after catching a string of assorted fish, one of the party, who was fishing with a 10 cent line on a cheap reel, hung Leviathan on a small hook. On one occasion some years ago Job expressed his doubts about anyone catching Leviathan with a hook. Secretly I have always agreed with him. The other two of us wound up our lines and stowed our fishin' poles away in the boat to watch the battle. We were more than skeptical about the result. I had read of such, but was a doubting Thomas. After playing his whale skilfully for half an hour, our Mr. Isaac Walton pulled him up to the side of the boat exhausted. Then our Mr. Ed Wurgler woke up and went into action. He deftly reached over the side of the boat, got a deadly tail hold with one hand, and passed his other arm under the fish and lifted it into the boat before one could wink an eye. We did not believe it could be done, but we saw it with our own eyes.

This catch ended our sport for the day. We immediately hoisted anchor, and pulled for the shore. Our fish was a drum, weighed 38 pounds, and measured 42 inches from tip to tip. Believe it or not.

Dr. J. B. Benton, Valley Park, attended the regular fall term of our circuit court in Mayersville on October 7. His friends were pleased to see him so much improved.

Dr. T. W. Huey, Grace, did not venture out to court for fear of being caught up for jury duty.

W. H. Scudder.

#### JEFFERSON DAVIS COUNTY

In response to your request of recent date, you

may mention that we are trying to collect and doing as little practice as we can.

Kenneth Terrell, the son of Dr. and Mrs. G. C. Terrell, Prentiss, has resumed his study of medicine at Tuscaloosa, Alabama.

Rod Jenkins, son of Professor and Mrs. D. R. Jenkins, of the Bassfield Consolidated School, has returned to Tulane where he will graduate in Medicine next June. Rod is one of the Commonwealth Students in the Medical Department of Tulane.

John Scott Berry, son of Dr. and Mrs. W. S. Berry, Prentiss, is specializing in chemistry at the University of Texas and will receive his Ph.D. degree there next year.

Dr. Hutchins, son of Mr. Walter Hutchins, Old Hebron, is doing well with two C.C.C. Camps near Lafayette, La. His headquarters are in Lafayette.

Master Robert E. Blount, Jr., accompanied by his aunt, Miss Ruth Ridgway of Jackson, returned to his father and mother, at Fort Slocum, New York. Dr. Robert Blount is a first lieutenant in the Medical Corps, U. S. Army, and is the son of Dr. E. N. Blount of Bassfield.

Miss Katherine Terrell, daughter of Dr. and Mrs. Terrell, Prentiss, is a student at Bellhaven College, Jackson.

Miss Imogne Blount, daughter of Dr. and Mrs. Blount is in her second year at Whitworth College, Brookhaven.

Dr. H. G. Williams, Dr. L. M. Magee, Dr. and Mrs. Terrell, Prentiss, Dr. and Mrs. Nichols, Carson and Dr. and Mrs. Blount, Bassfield, attended the meeting of the South Mississippi Medical Society at Columbia. The wives were entertained by Mrs. J. Gould Gardner in her home while the doctors had their session at the Mation Hotel. At six o'clock the wives and the doctors were served a good dinner at the hotel, the doctors of Columbia bearing the heavy burden.

At the usual recess between the session and the dinner, Dr. Gardner invited the members and visitors to go to the Clinic Hospital, and while there to partake of refreshments ready for them in the rooms of the laboratory department. One doctor seeing tubs of ice and bottles with foreign labels said he thought coca-cola was best. A messenger was promptly sent for one. He was satisfied, the others were too.

E. W. Blount.

#### JONES COUNTY

I want to publicly acknowledge that if we doctors of Mississippi were as faithful in discharging our duties as you are in trying to get us to that we would have a wonderful medical organization.

At a recent meeting the physicians of Jones County organized the Jones County Medical Unit and the following members were present: Drs. R.

H. Carter, H. G. McCormick, J. C. Gatlin, C. E. Armstrong, J. R. Kittrell, J. B. Jarvis, J. K. Oates, L. Golden, E. Bush, W. S. Harper, B. G. Earentine, T. Ramsey, Fridge, Tucker, Joe E. Green, R. T. McLaurin and R. H. Cranford.

The following officials were elected: Dr. R. H. Carter, president; Dr. J. B. Jarvis, vice-president; and Dr. Eugene Bush, secretary. Monthly meetings will be held at the South Mississippi Hospital. Meetings will begin immediately after lunch which will be 6:30. At the last meeting which was October 3 splendid papers were presented by Drs. Kittrell and Gatlin. Dr. R. H. Carter presented two very interesting clinical cases.

The question of an all time county health unit for Jones County was brought up which afforded quite a bit of discussion and it was unanimously voted that Drs. Ricks and Underwood would be invited to attend our next meeting, November 7, at which time a complete discussion will be had as to the ways and means in getting an all time county health unit for Jones County.

The following physicians from Jones County attended the meeting of the South Mississippi Medical Society at Columbia with Dr. Jack Gardner: Drs. J. B. Jarvis, W. N. Blount, Joe E. Green, Tom Ramsey, R. H. Cranford, T. R. Beech, J. R. Kittrell, J. K. Oates, and H. G. McCormick.

The month of September proved to be a great loss to our medical fraternity because of the death of Drs. T. E. Ross, Sr., of Hattisburg and Hand of Waynesboro. Dr. Ross has been one of our most useful medical leaders as well as leader in church and civic affairs. He was past president of the Mississippi Medical Association. Dr. B. F. Hand who has for the past several years been associated with Dr. W. P. Gray of Waynesboro and was very active in the practice of his profession, died suddenly from a heart attack.

Drs. J. K. Oates and B. G. Earentine have been absent from their office for the last four or five days. They have been in Pascagoula swamp. The doctors report a great time fishing and hunting with a crowd of other Laurel folks.

Roland Cranford, son of Dr. R. H. Cranford, recently received his appointment to Annapolis.  
Joe E. Green.

#### LAUDERDALE COUNTY

Dr. H. L. Rush is planning to attend the meeting of the American College of Surgeons which convenes in Los Angeles, California, October 30. He will be accompanied by Mrs. Rush and be absent from the city about three weeks.

Dr. Karl O. Stingily left September 28 for St. Louis Mo., where he will spend ten days or two weeks studying at the Skin and Cancer Clinic. During his absence Mrs. Stingily and little son, Karl, Jr., are visiting relatives in Coffeeville.

We are glad to report that Dr. T. A. Strain is

able to be up and out again after being quite ill at his home.

Dr. W. R. Holladay spent the month of August visiting various clinics, most of his time being spent in New Orleans.

Dr. Joe Evans, Gulfport, was in Meridian the latter part of September to visit his mother, Mrs. A. J. Evans.

Dr. Edwin McMorries of the U. S. Navy left Monday for Washington, D. C. after spending ten day in Meridian as the guest of relatives and friends. Dr. McMorries is now stationed at the Naval Infirmary in Washington.

C. J. Lewis.

#### LAFAYETTE COUNTY

The University of Mississippi School of Medicine opened for the thirty-second session on September 18. A first year class was not enrolled this year.

Dr. and Mrs. B. S. Guyton are spending the month of October on a vacation in California and Western Canada.

Professor J. B. Looper, Ph. D., has a leave of absence from the University of Mississippi School of Medicine for the present session. He is enrolled in the Schol of Medicine of the University of Chicago.

J. R. Simms, Jr.

#### LEFLORE COUNTY

Mrs. J. E. Dunlap, Schlater, widow of the late Dr. J. E. Dunlap was recently elected president of the Leflore County Unit of the Woman's Auxiliary to the Delta Medical Society.

The Leflore County Medical Society meets each month in conjunction with the staff meeting of the Greenwood Leflore Hospital 8 P. M. second Monday.

Mrs. T. B. Holloman, wife of Dr. T. B. Holloman, Itta Bena, was appointed matron of the freshman dormitory, Millsaps College, Jackson, where her daughter, Miss Mary Louise, is attending college.

Mrs. Bessie Barry Kennedy, widow of the late Dr. J. P. Kennedy, has moved to Jackson with her daughter Anne, to make her home.

Mr. Frank Yates, director, municipal swimming pool, last season, left for Philadelphia, September 20, to visit his parents, Dr. and Mrs. Claude Yates, before entering the Medical Department of the University of Tennessee.

Dr. and Mrs. S. L. Lane, Hollandale, visited relatives in Greenwood, September 21.

Dr. and Mrs. L. B. Otken attended the National Convention of the American Legion and Auxiliary at their recent meeting in St. Louis, Mo.

W. E. Denman, Jr., son of Dr. and Mrs. W. E. Denman, is attending the Medical Department of the University of Tennessee, Memphis. His brother,

"Gene" is attending the University of Mississippi at Oxford.

Granville Tabb, son of Dr. and Mrs. W. G. Tabb, is at Mississippi State College.

Miss Marjorie Yates is attending school at Sophie Newcomb, New Orleans. Miss Marjorie is the daughter of Dr. and Mrs. R. B. Yates, Greenwood.

Miss Louise Neilson Sandifer, daughter of Dr. and Mrs. F. M. Sandifer, Greenwood, was married to Mr. William Claude Hicks, Inverness, at the First Presbyterian Church, Greenwood, October 1, at 5 P. M. Dr. Fred Sandifer, Jr., came up from New Orleans to be present at the wedding and serve as one of the groomsmen.

Dr. Robert D. Dickens, Monticello, Ark., son of Dr. and Mrs. W. B. Dickens, Greenwood, will be married to Miss Anne Edwards, daughter of Dr. and Mrs. J. R. Edwards, Monticello, Ark., at Monticello on October 17, 6:30 P. M.

W. B. Dickens.

#### MONROE COUNTY

This is a wonderful autumn afternoon but I am sad and depressed. At six o'clock Sunday afternoon I received a telegram telling me that Dr. T. E. Ross, Sr., was dead. The telegram should have reached me some hours earlier but for some reason its delivery had been delayed. As soon as the shock passed I expressed a wish to go to my dead friend. Both my splendid girls spoke in unison saying we will go with you. At seven we were on the road. At midnight we reached Meridian and slept or rested till morning—then on to Hattiesburg. I will not attempt to relate the details of the funeral—they were too sacred to expose. I will simply say that I mingled my tears with those of the bereaved family, gazed at the dead face of him whom I have long known and lived, and with bowed head and heavy heart recovered the miles between Hattiesburg and Amory. A man who had been his pastor some years ago pronounced a short but fitting eulogy, one sentence of which would have sufficed. It was this: "He was God's good man." A truer, better friend I never knew. Human life is too short for one man to acquire many such as he. And now he is gone. "Requiescant in pacem."

Now permit me to turn back to thoughts and experiences that are filled with joy and happiness. On Monday afternoon, September 16, I was made very happy by coming into my home of a friend who is a prince among men, and his charming wife, who is also my friend. I refer to none other than Dr. John Darrington and his wife. They have long been my friends but this is the first time I have had the great pleasure of entertaining them in my home. On the day following their coming into my home our medical society held its third quarterly meeting for this year at Greenwood Springs. Dr. Darrington was guest speaker on our

program. No comments are necessary for no program was ever a failure when John Darrington graced it. There were other places filled by other splendid men. So altogether it was a most interesting day. I wish all my friends throughout the state could be with us some time when we gather at Greenwood Springs, Aberdeen or Amory. Nothing could make me quite so happy as to have them do so.

None of my doctors have been sick recently—nor have any of them suddenly grown rich. The weather has been so fine that practically all of a very short cotton crop has been gathered and much of it marketed. Some are gathering corn. I do not know what we shall turn our attention to now. None of the four billion dollars has come our way as yet. Nor do I expect that many of them will come this way. I guess we shall all need to go to Ethiopia if we crave action and excitement. I am today in receipt of a letter from our governor soliciting criticism and suggestions for the session of the legislature that will close out the present administration. I hope it may go out in a blaze of glory and that much good legislation may be enacted. But I fear that we (he or I) have hardly time to do all that is needed to be done (and undone). But let us courageously turn our faces forward and upward and may it be that the worst is NOT yet to come.

Another good friend of mine is, at this hour, being consigned to the grave. I refer to Dr. R. C. Bunting of Memphis. I could not go.

For fear that this letter should appear too morbid, I will say no more at this time.

G. S. Bryan.

#### PIKE COUNTY

Dr. T. Paul Haney, Jr., will attend the meeting of The American Public Health Association in Milwaukee this month.

Dr. T. B. Abney attended the horse show in Louisville in September.

Dr. Gladys Ratcliff has returned from Columbus where she assisted in the examination of M. S. C. W. students.

Dr. R. H. Brumfield has been elected a Fellow of the American College of Surgeons and will attend the Clinical Congress in San Francisco.

Dr. L. J. Rutledge is pulling in the king mackerel off Sand Point Light.

#### PONTOTOC COUNTY

The Pontotoc County Medical Society met in regular session October 1, with a splendid attendance. We had a very interesting paper on "Hypothyroidism, Its Diagnosis and Treatment," by Dr. Brown of Water Valley. The Pontotoc Society is to have an obstetrical course of ten lectures and clinics by Dr. Maxwell E. Lapham of Philadelphia. This course is to be held in Pontotoc, beginning November 5.



We regret to learn of the serious illness of Mrs. J. W. Gillispie, Sherman.

Dr. J. R. McDaniel, Steele, Mo., was a pleasant caller yesterday afternoon. Dr. McDaniel was formerly of Pontotoc, but has resided in Steele, Mo. for the past fifteen years.

Dr. A. P. Dunavant, Pontotoc, spent a week recently visiting friends and relatives in "The Lone Star State." He reports a very pleasant trip, but says Pontotoc is good enough for him.

R. P. Donaldson.

#### PONTOTOC COUNTY

Our Pontotoc County Medical Unit met in Pontotoc, Tuesday, October 1, with all but three members present. At the business session a plan was formulated for establishing a central collecting agency for the benefit of the doctors of this county. Under the plan a stenographer will be employed to address form letters to all clients submitted by the various doctors, with follow-up forms in cases where necessary. The scientific session consisted of a paper, "Hyperthyroidism", delivered by Dr. George Brown of Water Valley. His paper was very interesting and highly instructive. It was discussed by Drs. T. H. Rayburn, R. F. Shands, and W. H. Reid.

The death of Dr. E. G. Abernathy of Algoma, September 5 leaves this county with only twelve active physicians. However, the population of our county is only about 22,000 and I think that 12 physicians will be able to cover the territory.

Dr. J. H. Windham, Ecu, is happy over the arrival of a granddaughter a few days ago.

Health in this community remains fairly good. There is no serious illness among physicians' families.

Weather has been excellent for harvesting and most of the cotton has been ginned.

T. H. Rayburn.

#### RANKIN COUNTY

Dr. D. C. McCool, has resigned from the staff at Mississippi State Hospital and opened an office in the Physicians and Surgeons Building, 899 Madison Avenue, Memphis, Tennessee, specializing in nervous and mental diseases. He carries with him best wishes of the staff and employees of the Hospital.

The young men, whom the staff of the Mississippi State Hospital have enjoyed having with them for the summer months, have returned to their respective schools to enter their senior year in medicine, Mr. Irby of Oxford and Mr. Carlson of Quitman going to Vanderbilt; Mr. Friedman of Oxford to Tulane; Mr. Anderson of Sumrall to Chicago; and Mr. Busby of Hattiesburg to Louisiana State University.

Dr. and Mrs. E. S. Busby are spending their vacation with Mrs. Busby's family in Wisconsin.

W. H. Watson.

#### WARREN COUNTY

Old Man Depression in some mysterious way must have eventually gotten around that problematical corner and given full right of way to Prosperity's return, if we are to judge by the improvements recently and now being made at the private hospitals of our city, the Vicksburg Sanitarium, the Vicksburg Infirmary, and the Vicksburg Hospital. The Vicksburg Hospital has been built in its entirety within the past few years. At present, and for some time past, the Vicksburg Infirmary has been remodeling and rebuilding a three-story annex and markedly enlarging and re-furnishing the nurses' home.

Vicksburg is preeminently a hospital center in Mississippi, and deservedly so, for on the staff of each of its hospitals will be found men of eminent ability who enjoy this recognition of efficiency from many outside authoritative sources.

Dr. H. A. Stafford was the "Good-Will" Ambassador from our neighbor state, Louisiana, during the past month, and while here attended a staff meeting at the Vicksburg Hospital.

Dr. George Street, imbued with the Spirit of Isaac Walton, bent a few surgical needles into fish hooks and pulled out for the gulf coast of Mississippi, and while he "flunk out" the enticing lure, his little daughter was pondering the mysteries of all life or existence, and she asked: "Daddy, how do the fishes live in the sea", and Dr. George replied: "Why, baby, they live just like people do on the land, the big ones eat up the little ones." She says: "Daddy, let's go home. I see the Street Cleaner coming."

Dr. Charlie J. Edwards, one of our leading specialists on better seeing, more accurate hearing, more acute smelling, and more efficient swallowing, attended this month the annual meeting of the American Academy of Ophthalmology and Otolaryngology, convening in Cincinnati, Ohio. Dr. Charlie reports a most interesting and profitable session.

Dr. H. C. Ricks, Director of Bureau of County Health Work for the State Board, was a visitor in our city. Dr. Ricks was accompanied by Senor Jose Agreco of the Republic of Cuba.

Dr. Edley H. Jones again this month thrusts himself into *perfect focus* in the limelight of publicity by executing one of those unusual, unexpected, and unlooked for "stunts", for which he is now famous. He made a trip to New Orleans this month and took his wife with him. Dr. and Mrs. Jones were accompanied by his brother, Neil Callahan, whom they were entertaining in Tulane University Medical Department.

Dr. B. B. Martin, Sr. and wife were out of the city of Vicksburg one week in September on a short vacation trip. Dr. Martin will have to pardon us for that suffix to his name of Senior, but inasmuch as his son, Dr. B. E. Martin, Jr., is making a most acceptable "debut" into things medical



and inasmuch as the father and the son are so "youthful" in physical features, news items on all occasions will have to make the designation of senior and junior, or the general public might be kept "guessing."

Dr. E. J. Huey of Memphis paid us a short visit this month. Dr. Huey is with the Mississippi River Commission, Memphis District.

Dr. Guy C. Jarratt, the great exterminator of baby pacifiers, found this month that he was in need of some pacification, so with Mrs. Jarratt and the kiddies, we are informed, he took a short vacation from his "squally" vocation.

Dr. Preston S. Herring, now that sounds "fishy", but, believe it or not, he is off on a short vacation, leaving Vicksburg on the first of October. He will be away about ten days, and while away he expects to grasp the hand in friendly greetings of a few of his former friends and confreres in Memphis, Tenn. and Louisville, Ky.

"Until death do us part" found it's sacred, solemn, and sorrowful culmination in the long and happy wedded life of Dr. and Mrs. H. S. Goodman of Cary, when on September 28, the immortal spirit of Mrs. Goodman heard and heeded it's Master's final call. Dr. Goodman is a member and was a former president of the Issaquena-Warren Counties Medical Society, and Mrs. Goodman has been a faithful member and was a past president of the Woman's Auxiliary. The many professional friends of Dr. Goodman extend sincerest sympathy to him in his great loss, for Mrs. Goodman was one of those who, when she became a doctor's wife said:

"Oh, husband, let me walk with thee  
In lowly paths of service free;  
Tell me your secrets, let me help you bear,  
The strain of all your toil, the fret of all your care."

The "Old South's" city of enticing romance, New Orleans, was the destination of Dr. and Mrs. W. H. Parsons, who left Vicksburg October 4, for a week-end vacation.

Dr. H. T. Ims, County Editor.

#### WASHINGTON COUNTY

The many friends of Dr. A. J. Ware, Greenville, will be delighted to hear that his improvement has been such that he has been able to be moved to his home. An early complete recovery is wished for by all.

Dr. J. C. Pegues, Greenville, was called to Scottsboro, Ala., on account of the death of his father, Rev. D. K. Pegues, Sr. He was the oldest living member of the old Pegues family of South Carolina. He is survived by eight children and will be greatly missed in his community. Dr. Pegues has the sympathy of all his friends in his recent bereavement.

Dr. F. M. Acree, Greenville, visited his mother in Dover, Tenn. for a week before attending the American Legion Convention which was held in St. Louis, September 23 to 27.

Dr. and Mrs. Paul G. Gamble and children, Greenville, have returned from an extensive automobile trip in the east. On their way home they stopped at Nashville, Tenn., where they visited Mrs. Gamble's mother and brother.

Mrs. J. F. Lucas and children, Greenville, have returned home after a month's visit with her mother, Mrs. Gee of Carrollton.

Mrs. W. B. Wilson, Guntown, has returned home after a delightful visit with Dr. and Mrs. R. E. Wilson, Greenville.

Dr. D. C. Montgomery, Greenville, attended the meeting of the Academy in Cincinnati, Ohio recently.

Dr. D. C. Montgomery, has returned from Woodberry Forest, Va., where he went to accompany Cameron, Jr., who entered school there this fall.

Dr. J. A. Beals, Greenville, was guest speaker at the October meeting of the Issaquena-Sharkey-Warren Counties Medical Society.

Dr. H. A. Gamble, Greenville, attended the meeting of the National Hospital Association in St. Louis, October 1 to 4. Dr. Gamble is president of the Mississippi State Hospital Association.

Mrs. F. M. Acree, Greenville, is visiting relatives in Dover, Tenn.

Mrs. J. B. Franklin, Jackson, is visiting her father and mother, Dr. and Mrs. T. B. Lewis, Greenville. Mrs. Franklin will sing at the wedding of Miss Bertis Wells and Mr. Glen Bolton.

Mr. and Mrs. Carroll Fox, Seattle, Wash., were visitors for a few days with Dr. and Mrs. T. B. Lewis, Greenville. They have been making quite an extensive tour of the South.

Dr. and Mrs. J. B. Hirsch, Greenville, attended the funeral of Mr. E. Levi in Brownsville, Tenn. this past month.

Dr. and Mrs. G. W. Eubanks, Greenville, were recent visitors in Greenwood.

Dr. and Mrs. J. S. Sanders, Leland, attended the Hugh White celebration in Jackson. Dr. Sanders has been a frequent visitor to Jackson since then mingling with his many friends there.

Dr. J. G. Archer, Greenville, attended the American Legion Convention in St. Louis, September 23 to 27.

John G. Archer.

#### WINSTON COUNTY

Dr. W. W. Parks and his wife visited Memphis and other delta towns last week.

Dr. T. C. Suttle, Beth Eden, was in the city this week.

Dr. E. Lovorn was in the city looking after sales of cotton from his farm and other business. Doctor is a very successful farmer as well as physician.

Dr. E. L. Richardson recently made a trip to the delta hunting. He reports killing quite a few squirrels.

We noticed Dr. C. A. Kirk from Handle Community in the city with his usual smile and manner.

Dr. L. T. Parks, Fearn Springs, was in the city on business last week.

M. L. Montgomery.

#### COAST NEWS ITEMS

The Harrison-Stone-Hancock Medical Society met at the King's Daughters' Hospital, Gulfport, October 2, at 8 P. M., with a very good attendance. Dr. D. G. Rafferty, Pass Christian, was the speaker of the evening, presenting a paper "Wassermann Fast Syphilitics," the paper was very interesting and instructive bringing out much discussion.

The many friends of Dr. Charles LeEaron, Gulfport, are glad to learn that he has sufficiently recovered from his recent illness to resume his practice again.

Dr. E. A. Trudeau and Dr. B. B. O'Mara have recently opened an attractive and well equipped suite of offices in the Gay Building, Biloxi, where they will be associated in the practice of medicine and surgery.

Dr. G. F. Carroll and Dr. I. L. Parsons of the Veterans Hospital, Biloxi, attended the meeting of the Mobile County Medical Society, Mobile, Ala., September 21. Dr. Carroll was the guest speaker of the evening, presenting an interesting paper on "Post-operative Progressive Gangrene of the Skin."

Plans are underway to hold a joint meeting of the Coast Medical Societies at the Veterans Hospital, Biloxi, at a date to be announced later, probably in November. This meeting will do much to bring the various physicians and surgeons into friendly conclave and much interest is being manifested. The societies represented will include Harrison, Stone, Hancock, Jackson and Mobile.

Among the many friends attending the funeral services of Dr. T. E. Ross, Sr., at Hattiesburg, were Dr. D. J. Williams, Gulfport, and Dr. I. L. Parsons and Dr. G. F. Carroll of Biloxi.

George F. Carroll.

#### THE WOMAN'S AUXILIARY MISSISSIPPI STATE MEDICAL ASSOCIATION

President—Mrs. Leon S. Lippincott, Vicksburg.

President-Elect—Mrs. Adna G. Wilde, Jackson.

Secretary—Mrs. H. C. Ricks, Jackson.

Treasurer—Mrs. J. W. D. Dicks, Natchez.

Press and Publicity Chairman—Mrs. Hugh H. Johnston, Vicksburg.

#### WOMAN'S AUXILIARY TO THE HOMOCHITTO VALLEY MEDICAL SOCIETY

The Woman's Auxiliary to the Homochitto Valley Medical Society held their regular quarterly meeting, October 10, at the Eola Hotel.

Ten members were present and after an enjoyable lunch, the usual order of business was transacted.

Election of officers being in order, the following were nominated and elected:

Mrs. Lucien S. Gaudet, president for 1936.

Mrs. Homer A. Whittington, president-elect for 1937.

Mrs. C. E. Mullins, secretary for 1936.

Mrs. W. K. Stowers is the outgoing president and Mrs. E. E. Benoist outgoing secretary. Other officers will be appointed by the President at the January meeting.

Mrs. Lucien S. Gaudet.

#### HONOR ROLL

The following have contributed to the Mississippi Section of the Journal this month:

COUNTY EDITORS: Lucien S. Gaudet, W. C. Walker, Douglas D. Baugh, N. C. Knight, L. L. Minor, S. R. Towns, Harvey F. Garrison, Jr.; W. H. Scudder, E. W. Blount, Joe E. Green, C. J. Lewis, J. R. Simms, Jr.; W. B. Dickins, G. S. Bryan, R. P. Donaldson, W. H. Watson, Dr. H. T. Ims, John G. Archer, M. L. Montgomery.—19.

SOCIETIES: Adams County, W. K. Stowers; Central, L. W. Long; Delta, F. M. Acree; Homochitto Valley, Lucien S. Gaudet; Issaquena-Sharkey-Warren; North Mississippi, A. H. Little; South Mississippi, F. T. Bower; Wilkinson County, Edwin M. Butler.—8.

WOMAN'S AUXILIARY: Mrs. Lucien S. Gaudet.—1.

HOSPITALS: Jackson Infirmary, Harvey F. Garrison, Jr.; Mississippi Baptist Hospital, Harvey F. Garrison, Jr.; Vicksburg Sanitarium.—3.

OTHERS: Harvey F. Garrison, T. E. Ross, Felix J. Underwood, T. H. Rayborn, George F. Carroll.—5.

GRAND TOTAL—36.

Your editors thank you.

## BOOK REVIEWS

*Clinical Laboratory Methods and Diagnosis:* By R. B. H. Grundwold, M. D. St. Louis, C. V. Mosby Co. 1935. pp. 1028. Price \$8.50.

An exhaustive manual of laboratory methods, profusely illustrated, and thoroughly modern. Methods are described in some detail and in a clear and accurate manner. The scope of the volume is so great that it will be found too exhaustive for daily use by practicing physicians, medical students, and technicians; it will probably be fully and properly appreciated only by accomplished clinical pathologists.

MANUEL GARBBERG, M. D.

*Recherches Anthropométriques sur la Croissance:* By Paul Godin. Second edition. Paris, Amedee Legrand. 1935. pp. xi, 268.

Godin has been engaged for many years in anthropometric investigations of growth. His first publication specifically in this field was in 1891; the present volume is in a sense a summation of the author's work since that date. The first and larger part of the volume is a new edition of a broader study which appeared in 1902, while the second section is concerned exclusively with the influence of puberty on growth.

The study of adolescent growth is based upon repeated observations of the same subjects, made twice yearly from 13½ to 17½ years. At each of the nine periods 129 body measurements are recorded, so that the successive observations make it possible to follow the increase in absolute dimensions and changes in proportions. In addition to the metric records Godin makes a large series of direct observations, including such items as muscular relief, deposition of fat, development of pubic hair, skin pigmentation, color and abundance of head hair, etc. The results are presented in tables and graphs.

Godin's central idea in the study of the boy or girl is that growth and differentiation are best understood if referred to the history of the reproductive cells. While this point of view will be regarded by many as an unnecessary statement of a truism, some readers will find novelty in such consideration of the individual life history as a mere accessory to the continuity of germ plasm. The first phase of the organism is that of germ plasm alone—the fertilized egg cell—and the evolution of the body represents simply the evolution of a carrier which makes possible a perpetuation of that germ plasm. Thus through the embryofetal period and childhood the reproductive cells are proliferated but remain quiescent. Growth and maturation of the adolescent reflect the concurrent ripening of the reproductive cells, which thereafter have potentially continuous existence in the descendants of the individual.

Just as other pubertal signs are earlier in the female, the attainment of adult bodily proportions (as in relative volumes of trunk and head) advances earlier in the female. By means of measurements and collateral observations Godin sets down his conclusions regarding the onset of puberty and its stages. In his material puberty is attained at 13½ and 15½ years in females and males, respectively, and in both sexes full nubility is acquired during the five-year period following.

There is a bibliography, covering six pages, which is curiously lacking in citations of important American and German work in this field.

HAROLD CUMMINS, Ph. D.

*International Medical Annual*, 1935. Baltimore, William Wood & Co., 1935. Illus. pp. 522. Price \$6.00.

A splendid selective presentations of advances in medical science by a representative group of British physicians and surgeons. The prime purpose of the annual has to do with the treatment of disease, especially with those methods that can be immediately employed by the general practitioner. It is well edited and subject matter is easily found.

I. L. ROEBINS, M. D.

## PUBLICATIONS RECEIVED

Lea and Febiger, Philadelphia: Treatment of Diabetes Mellitus, by E. P. Joslin, M. D., M. A. Diseases of the Skin, by F. C. Knowles, M. D. Pathology of Internal Diseases, Second Edition, by Wm. Boyd, M. D., M. R. C. P., F. R. C. P., F. R. S.

The MacMillan Company, New York: Pediatric Treatment, by P. S. Porter, A. B., M. D., F. A. A. P. Chas. C. Thomas, Springfield, Illinois: Body Water, by J. P. Peters, M. D.

Edwards Brothers, Inc., Ann Arbor, Michigan: Diagnostic Criminology, by L. S. Selling, M. D., Ph. D., D. N. B.

P. Blakiston's Son & Co., Inc., Philadelphia: Clinical Psychiatry, by E. A. Strecker, A. M., Sc. D., M. D., and F. G. Ebaugh, A. B., M. D.

E. P. Dutton & Co., Inc., New York: Fifty Years a Surgeon, by Robert T. Morris, M. D.

J. B. Lippincott Company, Philadelphia: Disease of the Nose and Throat by C. J. Imperatori, M. D., F. A. C. S. and H. J. Burman, M. D.

W. B. Saunders Company, Philadelphia and London: A Textbook of Bacteriology, by T. B. Rice, A. M., M. D. The Stomach and Duodenum, by G. B. Eusterman, M. D., F. A. C. P. and D. C. Balfour, M. B., M. D., LL. D., F. A. C. S., F. R. A. C. S. and Members of the Staff of The Mayo Clinic.

Oxford University Press, New York: Oxford Medicine, Diseases of Heart, Blood Vessels and Blood, Vol. II, Part III, by Christian.

# New Orleans Medical

and

# Surgical Journal

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## HYPERTHYROIDISM\*

A. STREET, M. D.  
VICKSBURG, MISS.

Toxic goitre is not one of the most common diseases but it occurs with sufficient frequency to require physicians to always be conscious of its possibility in diagnosis. This is of tremendous importance because of the fact that treatment offers the patient in the early stages of the disease almost one hundred per cent chance of cure. The patient in the later stages has a poorer chance.

The geographic distribution of toxic goitre is more general than that of endemic goitre. There were 2,700 fatal cases in the United States in 1925.

Hyperthyroidism may be the result of overactivity of the thyroid gland, that is hyperfunction. It may result from leakage of secretion at an abnormally rapid rate, or it may possibly result from the production of a qualitatively abnormal secretion. The fact that feeding of thyroid substance will produce thyrotoxicosis but not exophthalmos is against the idea of hyperfunction alone. The presence in thyrotoxicosis of excess of iodine in the blood and in the urine, along with a colloid in the thyroid gland which is abnormally poor in iodine, strongly supports the theory that excess leakage, or "diarrhea" is actually what happens.

Thyroid tissue pathology does not always coincide with the clinical picture presented by the patient. However, it seems increas-

ingly evident that hyperplasia is the one pathologic finding indicative of thyrotoxicosis. Diffuse hyperplastic goitre, nodular adenomatous goitre, colloid goitre, and strumitis or thyroiditis are recognized. Actually the majority of specimens will show mixtures of these types. Pathologists are becoming more and more of the opinion that if they examine enough areas in a specimen of gland from thyrotoxic patient they will find hyperplasia, the cause of the toxic symptoms.

Clinically the symptoms are often striking, and need not be detailed here. They fall into two main groups, frequently indistinguishable; 1. diffuse hyperplastic goitre with thyrotoxicosis; 2. nodular goitre with thyrotoxicosis (toxic adenoma). Diffuse hyperplastic goitre is more common in younger patients, more prone to exophthalmos; to exacerbations, remissions and crisis; has a more striking facies and more exaggerated restlessness, and responds strikingly to administration of iodine. Nodular goitre with thyrotoxicosis is more common in older patients, more insidious in onset, less likely to be cyclic or to have crisis, more prone to exhibit the clinical picture of primary cardiac disease, less likely to show exophthalmos; facies is less striking, restlessness is less prominent, and there may be apathy, and is said by some to respond less favourably to administration of iodine.

I believe the most important factor in diagnosis is for the doctor to have hyperthyroidism in mind when making his routine examinations. The psychoneurotic patient can mimic thyrotoxicosis, and may have enlargement of the thyroid; but even if such a

\*Read before the Section on Surgery at the Sixty-Eighth Annual Session of the Mississippi State Medical Association, Biloxi, May 16, 1935.



patient has some hyperthyroidism and becomes cured of that trouble, you may be sure she will still be psychoneurotic. Every cardiac patient with any question as to the cause and nature of the cardiac condition should be considered from the thyroid viewpoint, both hyper and hypothyroidism. This is true whether there is palpable tumor or not. It is not uncommon to remove a fairly large thyroid gland at operation when no tumor was palpable at examination. Nodular goitres and substernal goitres are more prone to cause dyspnea from pressure than are diffuse goitres.

The treatment may be considered under two headings, first, preparatory, and second, curative. Until methods of proper conditioning of these patients were developed, the operation was hazardous. For preparation, quiet, rest, sedative, high caloric diet may be taken for granted. Preliminary ligations formerly were frequently advisable, and occasionally are yet. Patients with increasingly severe symptoms and rising metabolism should not be operated upon until a period of decline of symptoms or a stationary period is reached. Thyrotoxic patients of more advanced age, say 50 or more years, and who have visceral degenerative changes, are poor operative risks and will often do better with ligations and stage operations. Iodine properly used is apparently the most important part of preparatory treatment. Although it has been known for years that some cases of toxic goitre were benefitted by administration of iodine, it was also believed that iodine was a factor in producing toxicity. Kocher's warning that iodine may convert a non-toxic into a toxic goitre fostered this belief. Plummer's report in 1922 of successful use of iodine as a preoperative measure has resulted in widespread use and general acceptance of the method. There is some controversy as to the value of iodine in toxic adenoma, while admitting its value in hyperplastic goitre. Since it is often impossible to distinguish clinically between the two types, and it works well in practice, it seems best to give iodine as a pre-operative meas-

ure in all toxic goitre cases. Means and Lerman state that improvement in symptoms and fall in metabolic rate is so constant a sequence of iodine administration in toxic goitre that it is of diagnostic value. If there is no favourable response to iodine administration, the diagnosis may be questioned. In borderline cases this therapeutic test may be valuable. The dosage required is usually small. Plummer states that while ten minims of Lugol's solution three times daily may be more than many patients require it is a safe and adequate dosage. The full benefit will occur in about ten days. Iodine should be continued through the post-operative period. Lugol's solution or potassium iodide may be given intravenously or by rectum.

An occasional patient is seen who, in spite of all conditioning measures, iodine included, continues to get worse, the metabolic rate increasing or remaining at a high level. Such patients have been said to be iodine refractory. This assumption is questionable, as pointed out by Means. If the iodine is withdrawn from such a patient his symptoms will become promptly more severe. As a class this type of patient offers a bad prognosis. Some of them may be benefitted by roentgen therapy. The operation which should be done later if the patient improves, may be rendered more difficult, on account of the effect of the roentgen therapy. However, any such increased difficulty, and I do not think it exists to any appreciable degree, should be ignored in the type of case under discussion.

Curative treatment is preeminently surgical. Technical difficulties increase operative risk. I notice that some operators make the usual collar incision through the skin and platysma muscle, but without extending the incision through the deep fascia. I find the technique apparently much easier if the incision is carried down through the deep fascia, ligating the anterior jugular veins, and turning up a flap including the deep fascia and ligated veins, exposing the neck muscles cleanly. The resulting good exposure and easy

mobilization of the gland aids in the protection of the recurrent laryngeal nerves and of the posterior capsule with the parathyroid glands. The thyroidectomy should be subtotal. It is better to have some hypothyroidism following operation than to have recurrence. The deficiency of thyroid is satisfactorily controlled by small doses of thyroid substance. Post operative myxedema is very rare in any patients except very young ones.

#### VICKSBURG SANITARIUM CASES

In checking the records of thyroid cases treated at the Vicksburg Sanitarium during the last ten years I find eighty surgical cases with complete records, including tissue pathology. They are of the following varieties:

	Not		
	Number	Toxic	Toxic
Hyperplastic goitre, diffuse .....	2	2	
Hyperplastic mixed; colloid, adenoma or strumitis .....	14	14	
Adenoma and mixed adenoma, strumitis or colloid .....	39	32	7
Colloid goitre and mixed adenoma or strumitis .....	15	8	7
Thyroiditis and Riedel's struma	5	3	2
Cystoma .....	1		1
Carcinoma .....	4		4
	80	59	21

This group of goitre patients includes all types except the parenchymatous or so called fetal adenoma. Dr. Lippincott has not considered the fetal type as a separate class of adenoma, and has classed them as adenoma.

There were three operative deaths, one in the mixed hyperplastic group, and two in the toxic adenoma group. The patients who died were fifty or more years of age. They did not receive roentgen therapy as part of their preoperative treatment, although some of the others who recovered did receive that treatment.

A great majority of our goitre operations have been done on toxic patients. Endemic goitre is not prevalent in this locality. Purely diffuse hyperplastic goitre, the typical exophthalmic type occurs apparently in a very small proportion of our patients.

#### BIBLIOGRAPHY

Means, J. H.: The use of iodine in exophthalmic goitre., *Ann. Int. Med.* 4:117, 1930.

Haines, Samuel F.: Iodine in treatment of exophthalmic goitre, *Collected Papers Mayo Clinic*, 25:551, 1933.

Means, J. H. and Lerman, Jacob: *Jour. Am. Med. Assn.*, 104:969, 1935.

Rienhoff, D. D.: *Bull. Johns Hop. Hosp.*, 37:285, 1925.

Plummer, Henry S. and Boothby, Walter M.: The value of iodine in exophthalmic goiter. *Collected Papers Mayo Clinic*, 15:565, 1923.

#### DISCUSSION

Dr. T. E. Ross, Jr., (Hattiesburg): It would take a Dr. Crile to add anything to that paper. I am sure we all appreciate it, and I just want to make one statement about hyperthyroidism. In our locality in Hattiesburg I looked up the hospital records where I do my work, and found that we had had in the practice there eight cases of hyperthyroidism in the last five years, which seemed to me a rather small incidence from what I have heard of some of the other localities. Naturally, with that small number of cases, we have not had much experience. I think there are five metabolism machines in town and everybody is looking for it, but we just don't find it.

Dr. H. C. McLeod: (Hattiesburg): I would just like to stress what Dr. Street said. I am afraid the same condition exists that Dr. Ross mentioned—we do not have many cases, but I would like to stress the early recognition, thorough examination, pre-operative and post-operative care. I thank you.

Dr. J. Gould Gardner (Columbia): I really could not miss this opportunity to discuss and to compliment the essayist on this very fine paper. There are one or two things I would like to stress. One is, the great advantage, not only to the operator but to the patient, of the good exposure. Go right on down through the skin, muscle and fascia with a free sweep of the knife, sever the platysma muscles, then ligate and cut the anterior jugulars. By doing this we have little difficulty in freeing the gland and have, therefore, a very fine exposure. In my early work on goitre I started by cutting through the skin, then added a row of clamps to control the bleeding, then cut down a little deeper and added another row, and so on, until the patient was weighted down with clamps, causing undue pressure on the trachea. The operation sometimes would take two hours.

With a free exposure, freeing and pushing back the skin and muscles, with the use of hot towels, I proceed to free the gland, ligate the superior and inferior thyroid arteries usually by transfixing them. With the gland in full view and the recurrent laryngeal nerves located, the operation should be completed in thirty minutes instead of two hours. The danger of bleeding is minimized, traumatism is lessened, the incidence of infection is reduced and the chances of recovery proportionately increased.

Also, I wish to agree with the essayist in that it is better to take out a little bit too much when you can see and know exactly what you are doing with a free exposure, than it is to have to go back again and do the work over.

Dr. John Darrington (Yazoo City): When this essayist presents a paper to any association, he usually covers the subject so thoroughly that there is very little to be added. Thyroid operations in this country are not as frequent as they are in the North. Along the Great Lakes it is a very common ailment, but in Mississippi it is comparatively rare. Dr. Ross spoke of only eight cases in a city as large as Hattiesburg in a period of several years. An advance has been made in the treatment of goitre parallel to the advance made in the treatment of prostate enlargement, meaning by that, that the preliminary treatment, the careful preparation of the patient, has reduced the mortality until now it is no greater than for an average abdominal operation. Back in 1898, I had my first goiter case and the patient survived, strange to say, but I used all the forceps I had and I was afraid to go any further until I could get those parts ligated and have more forceps sterilized and in the next case I had I borrowed all the forceps in town. I did not want to be caught short again.

I was impressed with the weight of the forceps; finally you got to the point where you could not see the thyroid gland on account of the forceps. All that is a thing of the past now. It is a nice clean operation. With proper preparation before and following the technic that has been stressed we look on it as a comparatively simple operation.

The iodine test is of considerable value as an aid to diagnosis of hyperthyroidism. Where you have a patient with a fast pulse and many of the symptoms of exophthalmic goitre, and you give him iodine and he does not get any better, you are doubtful of the diagnosis. It is a simple and certainly a very effective diagnostic measure. Give them iodine and if they get better take the gland out, if they do not get better send them to a better doctor for a diagnosis.

Dr. Dudley Stennis (Newton): As regards the incidence of hyperthyroidism in Mississippi, I believe it to be on an increase. In the last three months I have seen three cases with a metabolic rate from plus 102 to plus 61. One was a young lady, 24 years of age, who had a slight enlargement of her thyroid gland, pulse normal, no significance, eyes normal. I gave her Lugol's solution for about ten days and operated on her and her basal metabolic rate was reduced greatly. Another was a young man who had been operated on for hyperthyroidism seven or eight years ago. We gave him Lugol's solution for ten days and

got his basal metabolic rate, which at the beginning was plus 102, reduced to about 64, and sent him to the Veterans Hospital at Tuscaloosa. Another was a man who had his eyes popping and his rate I believe was plus 62. I think he went to Mayo's. I believe hyperthyroidism is definitely on the increase in Mississippi. I found there were a good many cases in New Orleans last winter to my surprise.

Dr. Street (Closing): I want to thank the gentlemen who so kindly discussed this paper. If there is any other point that we might emphasize additionally, it is the possible confusion of hyperthyroid cases and cardiac cases. There are some, especially older patients, who come to me with cardiac symptoms, outstanding cardiac symptoms, and they very commonly will have auricular fibrillation. The cardiac features of the thing are so prominent that you just do not think of the thyroid, and yet some of those cases are hyperthyroid. Call them thyro-cardiac if you want to. If you remove the thyroid of a thyro-cardiac the patient gets well. If we are not on the lookout for it we are liable to overlook the thyroid ailment.

Of course the psychoneurotic is always with us, and they always want to be operated on and they very commonly come to you and tell you they have come to have the thyroid removed, that they have thyroid gland trouble. They tell you about everything that is the matter with them. Such a patient has a moist hand; but it is cold; they have a tremor, a coarse tremor, not the fine tremor of hyperthyroidism. You know the hyperthyroid patient's hand is warm, it is moist and warm. The psychoneurotic's is moist but it is cold. You ask the hyperthyroid patients if they have to wear many clothes when the weather is cold and they say, "No". They do not need much clothing, they are warm. You ask the typical psychoneurotic if they tolerate cold well and they say they do not tolerate cold, they get chilly, they have to have lots of clothes, they need to sleep under plenty of cover. That is not true of the hyperthyroid cases. If we do operate on one of the psychoneurotics who come to have the gland removed, they tell you about it beforehand and they tell you about it after you have operated too.

Now there will be a lot of controversy I think about treatment with roentgen ray, but I believe it is accepted, has been proved beyond a doubt, that roentgen ray therapy properly administered is beneficial to thyro-toxic patients. I do not mean to recommend roentgen ray treatment as treatment of toxic goitre. Everybody knows if you get them in condition and operate on them, that is the proper treatment and the only treatment; but if you have a case that is not operable, and with your iodine and your proper preparatory measures they just fail to get in good condition for operation, then



anything that will do them any good we ought to use. That is the type of case in which I add roentgen ray therapy to the preparatory treatment. Then when they do get in condition, go on and do the operation.

## RESECTION OF THE PRESACRAL NERVE FOR RELIEF OF PELVIC PAIN\*

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JACKSON, Miss.

A review of the literature on surgery of the sympathetic nervous system gives ample evidence of the optimism with which surgeons have entered this comparatively new operative field. Many of the surgical attacks on the sympathetic nervous system are complicated, with technical procedures which should not be undertaken without extensive anatomical review, and which can be attended with any constant degree of success only when preceded by exhaustive neurological studies. Fortunately, the operation for resection of the presacral nerve does not require any such intensive studies or special knowledge, and can be included in the armamentarium of all experienced abdominal surgeons.

Having had some satisfactory results following resection of the lumbar sympathetic ganglia for vascular disturbances of the extremities, and being encouraged by the reports of Fontaine and Herrmann<sup>1</sup> on relief of pelvic pain by interruption of sympathetic nerve supply, we were prompted to perform resection of the presacral nerve for the first time in March, 1932. Since that time this procedure has been used on sixteen additional patients, the results of which will serve as a basis for this report.

### HISTORICAL

Herrmann<sup>1</sup> attributes recent advances in relief of pelvic pain to recognition of the fact that the autonomic nervous system serves as a pathway for sensory impulses from the pelvic organs; this newer concept being contrary to

the former generally accepted belief that sensory impulses are transmitted only by cranial and sensory nerves. The first attempt to utilize this fuller knowledge of the physiology of the pelvic sympathetic nerve supply was by Jaboulay<sup>2</sup>, in 1898. He sought to interrupt the pelvic afferent impulses from a posterior approach by removing the coccyx, thereby gaining access to the sacral sympathetic plexus for its removal. About one year later, Ruggi<sup>3</sup> was the first to attempt interruption of sympathetic nerves by abdominal section. These efforts were only partially successful, and were superseded in 1921 by Leriche's periaarterial sympathectomy of the internal iliac arteries. In 1925, Cotte<sup>5</sup> described the technic for resection of the presacral nerve, and reported thirty cases operated upon for a variety of conditions, including dysmenorrhea, sclero-cystic ovaritis, vaginismus, and kraurosis vulvae. The operation has been widely used in Europe since that date, but no reports have been found in the North American literature prior to 1930.<sup>8</sup>

### ANATOMY AND PHYSIOLOGY

The superior hypogastric plexus, usually spoken of as the presacral nerve, (which is not presacral at all, lying instead anterior to the bodies of the fourth and fifth lumbar vertebrae), is a converging of the para-aortic sympathetic trunks from the solar plexus and adjacent lumbar ganglia. Its origin is slightly

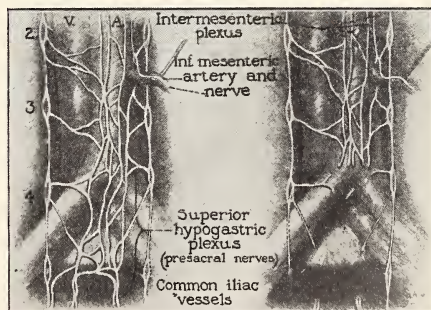


PLATE I

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above the bifurcation of the aorta, and it extends an average length of 5 cm. toward the promontory of the sacrum, lying slightly to the



left of the midline. A triangular area, the "inter-iliac-trigone",<sup>10</sup> bounded on either side by the common iliac arteries, and at the base by the promontory of the sacrum, serves as an ideal landmark, surgically. The nerve rests on the left common iliac vein and vertebrae bodies, and is covered by the peritoneum, being attached to neither, a fact that is of considerable surgical significance, since the right ureter, which is in the operative field, is always attached to the peritoneum, and is therefore easily avoided.

Our observation has been that the nerve lies in a sheet of connective tissue, easily separated from anterior and posterior structures. The implantation and position of the pelvic mesocolon may interfere with the exposure of the trigone, and although we have encountered a similar relation in one case only, numerous authors (10, 11, 1, 4,) report finding the mesenteric vessels covering the left half of the trigone, and Elaut<sup>10</sup> found in eight per cent "the presence of a long mesocolon, the root of which extends over the base, covering the entire trigone. This peculiar situation of the mesocolon makes any direct exposure of the trigone impossible." Considerable controversy exists as to the exact form of the nerve, and although our series of seventeen cases is of insufficient number on which to base accurate conclusions, our findings would seem to parallel those of Elaut<sup>10</sup>, who, after dissecting the nerve in fifty bodies, divided them into four types: (A) Single nerve type, 24 per cent; (B) plexus type, 58 per cent; (C) parallel type, 16 per cent; (D) arch-shaped type, 2 per cent.

Below the presacral nerve, the sympathetic fibers are continued into the pelvis as the right and left inferior hypogastric nerves, being finally distributed<sup>10</sup> to the bladder, lower part of the ureter, uterus, rectum, anus, coccyx, and in the male, the prostate and seminal vesicles. Attention is called to the fact that the ovary receives no innervation through the presacral nerve, being supplied instead from the ovarian plexus<sup>1</sup>, which in turn arises from the inter-mesenteric and renal plexuses, and accompanies the ovarian artery from its origin to the ovary.

Ovarian pain, therefore, is not relieved by resection of the presacral nerve, a fact that is borne out in case 10 of this report.

The exact physiology of the pelvic sympathetic nerve is still indefinite. From the mass of experimental and clinical data,<sup>1</sup> however, the evidence is ample to prove that:

(1) Pain impulses are carried from the pelvic organs by sympathetic nerves.

(2) Division of the presacral nerve does not alter the menstrual cycle. The experimental studies of Buchheim and Zaleski definitely prove that the lutein hormone exercises its effect independent of any innervation.

(3) Resection of the sympathetic nerve supply "does not interfere with spontaneous parturition does not produce glandular atrophy, chronic pelvic congestion, or any disturbance of the motor function of the bladder or rectum."<sup>1</sup>

(4) In the male, Herrmann<sup>4</sup> says: "Following section of the superior hypogastric plexus, male patients have found it impossible to ejaculate their semen, even though they were able to perform the sexual act, and experience a psychical orgasm which was indistinguishable from the normal. In the female there is no alteration of the sexual function."

#### INDICATIONS FOR OPERATION

A careful perusal of the literature will reveal the fact that although surgery of the sympathetic nervous system as a whole has yielded relief in a rather large variety of conditions, the chief indication for resection of the presacral nerve alone has been dysmenorrhea. Douglas<sup>12</sup>, reports five cases of intractable interstitial cystitis, with relief in three. Learmonth<sup>8</sup> feels that the operation was justified in one case of cord bladder, and there are several single case reports prior to February 1935, of extirpation of the presacral nerve in urological cases, <sup>13</sup>, <sup>14</sup>, <sup>15</sup>, which indicate that neurectomy may become a standard procedure for bladder disturbances due to derangements of its sympathetic nervous mechanism.

Gamble<sup>17</sup> reports resection in seven cases of obstinate constipation five of which were completely relieved, the other two decidedly improved, both stating that they were well satisfied with the results. If, as is true in the

urinary bladder, stimulation of the sympathetic nerve supply to the rectum and anus causes an increase in tone of the sphincters and decreased tonicity of the muscles of the walls of the rectum and anus, this indication is based on sound reasoning and should produce good results in those cases of constipation caused by increased tolerance of the rectum to the presence of a fecal mass, a condition frequently observed in women, and thought to be due to habitual postponement of the act of defecation.

The operation of Rankin<sup>10</sup> and Learmouth for Hirschsprung's disease, which includes division of the inferior mesenteric nerves, as well as division of the presacral nerve, gives excellent results, but will not be considered at this time.

#### DYSMENORRHEA

Fontain and Herrmann<sup>1</sup> divide the cases in which the presacral nerve section is indicated into two main groups: (1) Those cases of functional dysmenorrhea in which no demonstrable pathology can be found to account for the symptoms, and which do not respond to conservative measures. (2) Those cases presenting dysmenorrhea or pelvic pain associated with minor pathological conditions in the pelvis—retroversion, pelvic pains following other operations, correction of which condition frequently results in no relief. In the treatment of this group, Cotte has shown the importance of performing resection of the presacral nerve at the same time the pathologic process was corrected by comparing the results obtained in a series of 200 cases in which correction of the pathologic process alone was done, with a like series in which correction of the pathological process was combined with resection of the presacral nerve. The results were far superior in the latter group.

Although the operation has been used extensively in Europe for the relief of dysmenorrhea since its introduction by Cotte in 1925, no reports by American surgeons have been found prior to 1933. The series published since then have been comparatively small, but the excellent results reported suggest that it has been accepted as a standard operative procedure.

Cotte<sup>21</sup> has resected the presacral nerve in 125 cases of dysmenorrhea and where other disturbances such as vaginismus, dyspareunia, leukorrhea and vesical catarrh were present also, these, too, were relieved by the resection. He cautions against performing the operation in any condition other than true pelvic neuralgia. Herrmann<sup>4</sup> emphasizes the fact that the procedure is not a panacea for all pelvic ills, but urges its use in those cases of functional dysmenorrhea with pain primarily in the uterus and radiating to the anus, rectum, coccyx and urinary bladder, that is, the distribution of the presacral nerve. DeCoursey<sup>7</sup> reports 21 cases with good results. Weatherall<sup>19</sup> does not resort to the procedure until "all known methods of relief short of the use of opiates, radiation and hysterectomy" have been carried out, but feels that the resection of the nerve will allow "the conservation of female reproductive organs, which have heretofore been sacrificed." Adson and Masson<sup>6</sup> feel that their group of six cases is too small to permit general conclusions, but the excellent results obtained justify continued use of the operation in those cases of dysmenorrhea not relieved by medical measures. As demonstrated in the following case record abstracts, relief can be expected only over the proved distribution of the presacral nerve. Illustrative of this point, case 10 had no pain at menstruation following operation, but did develop left ovarian pain some months later, which was relieved by the removal of an ovarian cyst. Case 7 has not gotten complete relief, because of pain in the back and side; areas outside the distribution of the presacral nerve. Location of the pain in case 8 was not in the region supplied by the nerve, and, therefore, got no relief at all following operation. Case 13 had such extensive involvement of the pelvis that any relief experienced from resection of the presacral nerve was masked by the severe pain in other regions. For complete pelvic neurectomy resection of the presacral nerve must be combined with removal of the preaortic sympathetic fibre from above the level of the origin of the inferior mesenteric artery downward to the presacral nerve, and resection of the last two or

three lumbar sympathetic ganglia on either side.

#### SURGICAL TECHNIC

Adequate exposure of the operative field is essential. Having obtained complete surgical relaxation, either by subarachnoid or ether anesthesia, a left para-median incision is made, beginning one inch above the level of the umbilicus and extending downward as far as is necessary to secure full exposure of the interiliac trigone. If surgery on the pelvic organs is contemplated, the incision should extend to the symphysis pubis. The incision having been completed, the patient is placed in extreme Trendelenburg's position, and the intestines held out of the operative field with laparotomy sponges. Having visualized the bifurcation of the aorta and the common iliac arteries, the peritoneum just above the bifurcation of the aorta is caught up on either side of the midline and incised. It separates readily from the connective tissue beneath it, and the incision is carried downward past the promontory of the sacrum so as to bare the interiliac trigone. Formerly it was our practice to

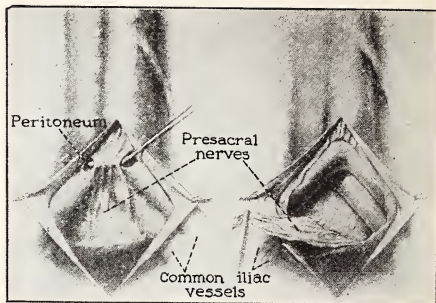


PLATE III  
By permission of Dr. Hoffman

than by attempting to isolate and remove each separate fibre.

Care should be taken, of course, to avoid injury to the common iliac arteries or vein, and to the middle sacral artery, but no great difficulty will be encountered in avoiding these structures, since neither the presacral nerve nor its connective tissue covering is adherent to them. When the mesocolon occupies the left half of the trigone, it must be carefully displaced to the left before resecting the nerve. After all bleeding points have been caught and ligated, the peritoneum is closed with a running suture of plain catgut. Cotte recommends that all other operative procedures should have been completed prior to resection of the presacral nerve. There is nothing difficult about the technic and the entire procedure as mentioned above should not consume longer than five minutes.

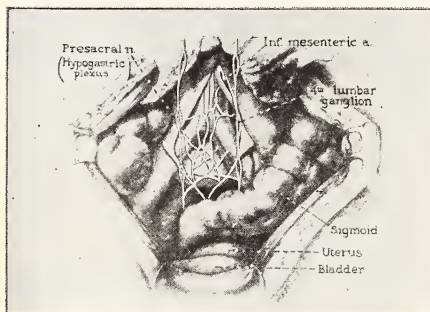


PLATE II

This illustration used by permission of Dr. W. McK. Craig of the Mayo Clinic.

follow the technic suggested by Cotte, which consisted in locating the nerve fibres and removing each separately. More recently we have followed the suggestion of Adson, which we believe insures more efficient removal of the entire nerve. This consists in removing the connective tissue from the entire triangular area. By so doing, the enveloped presacral nerve is removed also, and in a more thorough manner

#### CONCLUSIONS

Review of the case records in seventeen cases, observed over a period of three years indicates that:

(1) Resection of the presacral nerve relieves dysmenorrhea characterized by pain in the uterus, urinary bladder, rectum, anus and coccyx.

(2) With the possible exception of the vagina, pain in any region other than those mentioned above will not be influenced by neurectomy.

(3) No immediate or remote ill effects have been observed following the operation.



(4) The operation for resection of the presacral nerve is simple of execution, does not preclude the performance of other necessary surgery, and is a valuable addition to the armamentarium of the pelvic surgeon.

Summary of results obtained following resection of presacral nerve based on answers to letter of inquiry, dated April 2, 1935.

Case Age	Length of Time since Operation	RESULTS Degree of Relief Expressed in Percentage.
(1) 21	3 yrs. 2 mos.	100% for twelve months Return of pain attributed to regeneration of nerve.
(2) 27	3 yrs.	100%
(3) 35	2 yrs. 11 mos.	100% for 18 months. 90% (very slight back-ache during menstruation) since then. Entirely satisfied with result.
(4) 24	2 yrs. 10 mos.	100% Has had normal pregnancy and delivery since operation.
(5) 24	2 yrs. 9 mos.	85% Feels greatly repaid for having had the operation.
(6) 23	2 yrs. 6½ mos.	100% Has had normal pregnancy and delivery since operation.
(7) 18	2 yrs. 6 mos.	90% Entirely satisfied with results. Pain only in back and side.
(8) 30	2 yrs. 5 mos.	0 Failure due to improper selection of case. Location of pain outside distribution of presacral nerve.
(9) 21	1 yr. 55 mos.	90% Menstrual periods which were 8-14 days prior to operation are now 4 days.
(10) 23	1 yr. 6½ mos.	100% Recurring ovarian cyst caused constant pelvic pain until removal at second operation.
(11) 18	1 yr. 6 mos.	100% Has had normal pregnancy and delivery since operation. No uterine pain while in labor.
(12) 49	1 yr. 5 mos.	80% Complete relief in region supplied by presacral nerve. Now has pain only in left leg and hip.
(13) 53	1 yr. 3 mos.	0 Improper selection of case. Extensive pelvis malignancy Died 3 months after operation.

(14) 27	1 yr. 4 mos.	100%	
(15) 32	11 mos.	100%	
(16) 30	6 mos.	85%	Some pain around anus during menstruation.
(17) 24	5 weeks	100%	Completely relieved while in hospital. No follow-up since discharge from the hospital.

## CASE REPORTS

Case 1. On September 12, 1931, Miss B., a stenographer, aged 21 years, came for examination on account of severe pain at the menstrual time which had caused her to get weak and nervous and lose her appetite at her periods, since the age of 12. For the past six months the pain had increased in severity and she had fainting spells which came on a day or so after each menstruation. Examination revealed no abnormality of the pelvic organs with the exception of a small cervix and she was advised to have a dilatation of the cervical canal. Ten days later she developed an attack of acute appendicitis for which an immediate operation was done. The uterus, ovaries and tubes were explored for any possible cause of the dysmenorrhea and were found normal. Dilatation of the cervix was done. Her convalescence was uneventful but the next menstrual period was as much or more painful than the one preceding the cervical dilatation and each menstruation thereafter continued to be increasingly severe until four months later when another dilatation of the cervix was done and a stem pessary introduced. This was worn through a menstrual epoch but gave no relief. But this time the pain was not limited to the duration of menstruation alone but continued practically the whole month. Because of increased weakness, nervousness and pain she had to stop work and remain in bed most of the time. March 31, 1932, resection of the presacral nerve was done. Immediately after her reaction from the anesthesia she stated that all pelvic pain was gone and never since then has it returned. On February 14, 1933, eleven months following resection of the presacral nerve, she replied in answer to an inquiry: "As I stated before, I do not have any pain during my periods." May 1, 1935 patient reported for further treatment. Following the last report she began having pain during menstruation. Not much at first, but increasing in severity each month. Now she suffers as much as before operation. The return of pain is attributed to regeneration of the nerve, and she was advised to have a second operation, which is to be done at a later date.

Case 2. On May 16, 1932, Miss M., aged 27 years, a school teacher, reported for examination and treatment for painful menstruation, so severe that it was usually necessary for her to remain in bed



during the menstrual flow. The flow was quite free for the first two days and the pain was no more severe at the beginning than at the end of menstruation. Examination showed the uterus in retroversion with some thickening of the posterior surface of the cervix. The following day an internal Alexander suspension of the uterus, appendectomy, dilatation of the cervix, and resection of the presacral nerve was done. Convalescence was uneventful and she has communicated several times since then that she was getting along nicely. On January 31, 1933, she reported: "I am getting along beautifully. Never have a pain during my monthlies." In answer to the inquiry of April 2, 1935 she states, "I would highly endorse this operation for any woman who is the victim of painful menstruation."

Case 3. On June 23, 1932, Mrs. G., aged 35 years, stated that menstruation had been painful for four years, much worse for the past four months. She had cramps badly for two weeks before each period and had to stay in bed the first day of each period. At the time she came for examination she was not menstruating but if she stood on her feet for as long as an hour she would hurt so badly in the pelvis that she would have to sit down. Examination of the pelvis revealed no abnormality except tenderness of the uterus. June 24, the following day, laparotomy was performed, the pelvic organs and gall bladder were found normal, the appendix had been removed at a previous operation, and no adhesions were found in the abdomen or pelvis. Resection of the presacral nerve was done and no complications developed post-operative. Ever since she has had no pain in her pelvis and February 20, 1933 she reported: "I have menstruated regularly since my operation, and have had no pain." April 5, 1935, she wrote: "For 18 months after the operation, I had no pain at the time of menstruation. Since then I have only slight backache. There is no severe pain at any time, as I was having before."

Case 4. Mrs. J., aged 24 years, came June 27, 1932, complaining of backache and painful menstruation. She had had two miscarriages, one three years ago, and another one year later; no children. She had had backache and painful menstruation since age eleven. The backache had been worse and almost constant for three years. Examination of the pelvis showed retroversion of the uterus, otherwise negative. At operation June 28, the following day, the uterus was found to be retroverted, the right ovary cystic and the appendix chronically diseased. An appendectomy, right oophorectomy, internal Alexander suspension of the uterus, and resection of the presacral nerve was done. Ten days later she left the hospital in good condition and February 11, 1933, reported: "I have gained in weight twenty pounds and have never a pain during my menstrual period." April 4, 1935 she

reported that she had no pain on menstruation, and on February 13, 1935 delivered a twelve-pound baby."

Case 5. Mrs. M., aged 24 years, stated she had cramps badly at each period since she began to menstruate, probably getting worse. Examination July 10, 1931, showed a hard, conical cervix and on the following day the cervix was dilated and stem pessary introduced. Routine Wassermann was found positive and antisyphilitic treatment begun. One year later she was still having very painful menstruation and resection of the presacral nerve was done. There were some adhesions from the operation in 1918, when the right ovary and appendix were removed, but no other pathology was found. She left the hospital in the usual length of time and did not report until February 28, 1933 when she stated: "I had a little pain with the first few periods after my operation but since then the pain has been less and now I do not cramp at all." April 4, 1935, she stated that she had a few pains on the second day of menstruation, but otherwise feels great.

Case 6. Mrs. M., aged 23 years, came October 23, 1932, complaining of attacks of pain in the right lower abdomen and very painful menstruation. For the past six months the pain in the appendiceal region has been almost constant. The menses began at 18 years, very painful from the beginning with scant flow. October 24, the appendix was removed for chronic inflammation and resection of the presacral nerve was performed. The uterus, ovaries and tubes were normal. This patient was a member of a religious sect that has as part of its doctrine a disbelief in medicine and surgery, and came to the hospital under protest. In spite of that mental handicap she reported February 11, 1933: "Have had one menstrual period since my operation, it was not painful. Supposedly I am about two months pregnant." This was of especial interest since it afforded an opportunity to observe the effect of the operation on pregnancy and more particularly parturition. November 3, 1933, we were pleased to receive an answer to our inquiry in which she stated: "I did not have very many pains when the baby came. The women that were with me said I had an easy time, and I thought so, too."

Case 7. Miss H., aged 18 years, complained of very painful menstruation; general abdominal soreness; indigestion; weakness; drowsiness, and frequent attacks of sore throat. Examination which included complete laboratory and roentgen ray reports showed the presence of hookworm ova in the stool but no other gastro-intestinal lesion. The vaginal examination was negative except for a slight backward displacement of the uterus. The tonsils were chronically diseased. On the following day the appendix was removed, the uterus, tubes, and ovaries were normal, and resection of the presacral

from the hookworm disease, but February 29, 1933, she wrote: "Yes, the operation helped me greatly, the few pains I now have are nothing to compare with what I formerly had." April 5, 1935, she wrote: "Now, menstruation never brings on a headache. Sometimes, however, my back and side give me trouble, but even then the pains are not anything like as bad as they were before the operation."

Case 8. Mrs. B., aged 30 years, complained of dull aching, boring pain in her lower abdomen. Although the pain was not confined to the pelvis, it was worse during menstruation. The appendix and right ovary had been removed at a former operation, four years before. General examination nerve was done. She had not entirely recovered revealed hookworm disease. The cervix was badly lacerated and chronically infected. The perineum showed an old second degree laceration. Pelvic examination was otherwise normal. December 6, 1932, Sturmdorff amputation of the cervix, perineorrhaphy, and resection of the presacral nerve was done. In January 1933, the next month after operation, she reported that she had pain in her back and in the region of the left ovary at the time of menstruation, but in February, one month later, she stated: "I felt a little better this month, had some pain but not so much as I did before." In reply to the last enquiry she stated that the operation had not relieved her dysmenorrhea. At each menstrual period there was severe pain in the region of the left ovary and back.

Case 9. Miss T., who had been a patient at the State Tuberculosis Sanatorium for several years, was referred because of abdominal pain suggestive of intestinal obstruction, and continued weakness, fever and disability. At operation on December 19, 1932, the fallopian tubes were studied with tubercles, and bound down by adhesions. The uterus was normal. The ovaries were normal. The appendix had been removed at a previous operation. A bilateral salpingectomy was done, and her convalescence was uneventful with the exception of the fact that pelvic pain which has been present before operation, continued. She had also had dysmenorrhea since the establishment of menstruation. The pain continued until June 17, 1933, when resection of the presacral nerve was done in the hope that she would get some relief. Both operations were done under subarachnoid anesthesia, her convalescence being uneventful, with the exception that she was very slow in regaining her strength. April 4, 1935, she stated that she was at home, and that she still had some pain with menstruation but the pelvic pain was practically gone, and she had regained her usual good strength. There was no evidence of any tuberculous peritonitis as far as her symptoms were concerned.

Case 10. Mrs. P., aged 23 years, had been pregnant three times; one normal pregnancy and two

abortions. Menstruation was regular, duration less than a week, but for the duration of menstruation it was necessary to remain in bed and take hypodermics for the relief of pain. In 1931 the appendix and right ovary were removed, but the clinical record of the operation was not available. Examination revealed a small hernia in the upper portion of the former incision. On examination the perineum was normal, uterus and left ovary normal in size and position, and no tenderness could be elicited. At operation October 30, 1933 a small cyst of the left ovary was resected, no other evidence of pathology being found. Resection of the presacral nerve was done, and convalescence was uneventful. She had no pelvic pain until June 1934, when there developed pain in the region of the left ovary. The pain was present all the time, but was worse during menstruation. There was also a large, postoperative hernia. At operation for the hernia, a small cyst of the left ovary was found and resected, since which time she had had no more pelvic pain, although a second repair of the ventral hernia was necessary. April 7, 1935, she wrote: "I have had no pains at all with my menstruation since the operation."

Case 11. Miss B., aged 18 years, October 20, 1933 she came complaining of dysmenorrhea and pain in the right lower abdominal quadrant. In February, 1931, appendectomy had been performed through a right rectus incision, and she thought the pain was caused by the scar. Her family physician stated that he had felt a mass at the external inguinal ring some weeks before. Examination of the abdomen was negative with the exception of tenderness over the right external inguinal ring, but there was no mass or impulse on coughing. Pelvic examination was entirely negative. Ten drops of tincture of belladonna was ordered to be taken three times daily, and an abdominal support fitted. One month later no relief had been obtained, and on November 19, 1933, operation was performed. The pelvic organs were explored through a midline incision, and found to be normal. There were no adhesions about the base of the cecum, and no inguinal hernia. On account of the pain in the region of the right external inguinal ring, a hernia repair was carried out. Resection of the presacral nerve was done through the midline incision. Her convalescence was uneventful, and she has had no more abdominal pain or dysmenorrhea. Several months following operation she married, and on February 19, 1935, I delivered a normal baby. Labor lasted eight hours, and the only unusual feature was the absence of abdominal pain during uterine contraction. There was the usual amount of perineal pain, for which nitrous oxide anesthesia was given. The puerperium was uneventful.

Case 12. Mrs. A., aged 47 years, had resection of the presacral nerve December 18, 1933, following

application of radium for menorrhagia and metrorrhagia, which caused severe abdominal pain. April 12, 1935 she reported: "I suffer some when time for the monthly period, but not in the same way. It is mostly in my left leg from my hip all the way down."

Case 13. February 13, 1934, Mrs. B. had resection of the presacral nerve in an attempt to relieve the severe pain from inoperable carcinomata of both ovaries and uterus. Complete pelvic neurectomy had been planned, but due to retroperitoneal metastases and poor physical condition of the patient, this more extensive procedure could not be completed. Following operation she received no relief from pain, and died three or four months later.

Case 14. Mrs. B., aged 17 years, mother of two children, stated that she had always had painful menstruation. Examination showed an old second degree laceration of the perineum, with the uterus in extreme retroversion. No other pathology was found. On January 15, 1934, a perineorrhaphy was done, suspension of the uterus, and resection of the presacral nerve being carried out at the same time. Her convalescence was uneventful, and on April 3, 1935, she stated: "So far, my menstrual periods have been without pain."

Case 15. Mrs. L., aged 32 years, reported on June 15, 1934, and stated that the menses were established at the age of 14 years, and had always been irregular, with intervals of from six to eight weeks, last menstruation was two weeks ago. Duration of menstruation three days, and always is extremely painful. She gave a history of attacks of pain in the right lower abdomen, suggestive of appendicitis, and at operation on June 16, 1934, the appendix was found to be greatly thickened and bound down by many adhesions, with unmistakable evidence of chronic inflammation. There were some small cysts of the right ovary, and the left ovary was normal. The uterus was normal in size and position. At operation, the appendix was removed and resection of the presacral nerve done. Her convalescence was uneventful, and on April 12, 1935, she stated that she had had no more pain with her menstruation.

Case 16. Mrs. F., aged 30 years, reported August 7, 1934, stating that intercourse was extremely painful and that she had pain with menstruation. Seven years before, a portion of the left ovary and a portion of the uterus was removed. This did not relieve the pain. Examination showed marked tenderness of the uterus, and ulceration of the cervix uteri. She was referred to her home physician for cauterization of the cervix uteri, and medical treatment for pelvic pain. She reported back several times in the interim, and on November 8, 1934, because she had not received any relief from the pain, or painful intercourse, operation was performed. At operation, there was some

omental adhesions to loops of ileum, and a small cyst of the right ovary. The uterus was about half normal size, the left ovary being normal. The cyst of the right ovary was resected, the omental adhesions released, and resection of the presacral nerve done. December 28, she returned for examination, at which time all vaginal tenderness had disappeared, and on April 5, 1935, she stated that she had no more pelvic pain and no more pain with intercourse.

Case 17. Mrs. W., aged 24 years, stated that she had always had painful menstruation. June, 1934, she began having attacks of cramping so severe with each menstruation that she was "stiff as a board." She also had severe pain with sexual intercourse. Examination revealed no evidence of any abnormality or disease in the pelvis, and she was advised to have resection of the presacral nerve for the dysmenorrhea and dyspareunia. April 9, 1935, resection of the presacral nerve was done. She made an uneventful convalescence therefrom, and had no pain while in the hospital. Since operation she has not menstruated, but reported May 12, that she was feeling well and having no pain of any kind.

#### BIBLIOGRAPHY

1. Fontaine, Rene, and Herrmann, L. G.: Clinical and experimental basis for surgery of the pelvic sympathetic nerves in gynecology, *Surg., Gynec. and Obst.*, 54:133, 1932.
2. Jaboulay: Le traitement de la neuralgie pelvienne par la paralysie du sympathique sacre, *Lyon Med.* 90:102, 1899.
3. Ruggi, Giuseppe: La sympatectomia abdominale utero-ovarica come mezzo dle cura di alcune lesioni interne negli organi genitali della donna, *Bologna, N. Zanichelli*, 1899.
4. Herrmann, L. G.: Resection of the superior hypogastric plexus for the relief of pelvic pain. *Jour. Med.*, 14:291, 1933.
5. Cotte, G. and Delchaume, M.: Technique and indication for operations upon the pelvic sympathetic in gynecology, *Jour. de chir.*, 25:653, 1925.
6. Adson, A. W. and Masson, J. C.: Dysmenorrhea relieved by resection of presacral sympathetic nerve, *Jour. Am. M. Assn.*, 102:986, 1934.
7. DeCoursey, J. L.: Resection of the presacral nerve for dysmenorrhea, *Am. Jour. Surg.*, 23:408, 1934.
8. Learmonth, J. R. and Brach, Wm. T.: Resection of the presacral nerve in the treatment of cord bladder, *Surg. Gynec. and Obst.*, 51:494, 1930.
9. Davis, A. A.: The presacral nerve, its anatomy, physiology, pathology and surgery, *Brit. Med. Jour.*, 2:1-6, 1934.
10. Elaut, L.: The surgical anatomy of the so-called presacral nerve, *Surg. Gynec. and Obst.*, 55:581, 1932.
11. Greenhill, J. P. and Schmitz, H. E.: Sympathectomy for intractable pain in inoperable cancer of the cervix. *Jour. Am. Med. Assn.*, 101:26, 1933.
12. Douglas, H. L.: Excision of the superior hypergastric plexus in the treatment of intractable interstitial cystitis; report of five cases, *Am. Jour. Surg.*, 25:249, 1934.
13. Foulds, G. S.: Resection of the presacral nerve in urological cases, *Brit. Jour. Surg.*, 20:139, 1932.
14. McConnell, A. A.: Vesical pain (including treat-



ment by sympathetic neurectomy.), *Irish Jour. Med. Sci.*, 1933, p. 200.

15. Viannay, C.: On the treatment of painful cystitis which has reached the state of cystalgia by operations upon the pelvic sympathetic and particularly by resection of the presacral nerve, *Arch. francobelga de chir.*, Brux., 30:220, 1927.

16. Rankin, F. W., Barges, J. A., Buie, L. A.: The Colon, Rectum and Anus, Philadelphia, W. B. Saunders Co., 1932, p. 799.

17. Dr. H. A. Gamble, Greenville, Miss., personal communication.

18. Spencer, G. A.: Pelvic neuritis, pathology and treatment (by resection of the presacral nerve or superior hypogastric plexus), *Jour. Nat. M. Assn.*, 25:66, 1933.

19. Weatherall, F. S.: Relief of pelvic pain by sympathetic neurectomy; 7 cases in which superior hypogastric plexus (presacral nerve) was resected, *Jour. Am. Med. Assn.*, 101:1295, 1933.

20. Graffagnino, P.: The value of presacral sympathectomy in gynecology, *South. Med. Jour.*, 28:353, 1935.

21. Cotte, G.: Resection of nervus presacralis in gynecology: Indications and results, *Zentral. f. Gynaekol.*, 57:72, 1933.

## DIAGNOSIS AND TREATMENT OF AMEBIC HEPATIC ABSCESS\*

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Amebic abscess of the liver is of particular interest to both internists and surgeons. Although amebic hepatic abscess is a surgical condition, the former is interested in this complication of amebiasis because of its high incidence, as evidenced by the ratio of 1 to 4 or 6 in hospital series <sup>1,2,3</sup>. Whereas this high complication incidence may appear to be the result of late diagnosis and inadequate therapy of the original amebiasis such is probably not the case in the majority of instances. The fact that in a large percentage of individuals amebiasis exists without diarrhea and with few or no symptoms undoubtedly accounts for the absence of diagnosis and therapy and the subsequent development of hepatitis. The surgeon is actuated by the zealous desire to diminish his admittedly high mortality rate. This has been due in great measure to two prevalent, but erroneous, conceptions. Authorities on amebiasis have known for a long time that the

disease occurs ubiquitously, but this now well-established fact has only recently been generally appreciated. Even as early as 1902, Sir Leonard Rogers<sup>4</sup> contended that amebic hepatic abscess occurred in other climates and objected to the term "tropical abscess." Craig<sup>5</sup> opines that between 5 and 10 per cent of the people of this country harbor the parasites. The other prevalent, but erroneous, conception concerns the frequency with which diarrhea is manifested clinically in the previous history of patients that develop amebic infections of the liver. Many individuals are recalcitrant at the thought of making this diagnosis in the absence of an antecedent history of dysentery or other bowel symptoms. That amebic hepatitis or abscess not only can, but also frequently does, occur in patients in whom there is no clinical manifestation referable to the colon is irrefutably demonstrated by an analysis of 318 cases collected from the literature, including 52 of our own, in which there were 131 (41.1 per cent) in which no antecedent diarrhea had occurred (1). As 42 (81 per cent) of our 52 cases (1) had no diarrhea at the time of admission to the hospital, the relationship of the hepatic lesion to amebiasis is even less obvious. The explanation for this relatively high incidence of the occurrence of amebic hepatitis in the absence of an antecedent diarrhea lies in the fact that slight amebic infections of the bowel limited to the right half of the colon may produce no diarrhea. Whereas relatively slight infections limited to the left side of the colon and producing excessive secretions of fluids result in frequent evacuations of watery stools, similar lesions located in the right side of the colon are not manifested by diarrhea, because the fluid is absorbed in its passage through the uninvolved and normally functioning left side of the colon. That amebic infections frequently occur in only the right side of the colon has been conclusively demonstrated by Rogers<sup>6</sup>, who found that in almost two-thirds of 36 autopsied cases the lesion was limited to the cecum and ascending colon, indicating the latency of the infection during life.

The diagnosis of amebic hepatitis and hepatic abscess is not difficult, if constantly kept

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in mind, and this possibility must always be considered in any patient with a persistent enlargement of the liver associated with pyrexia. The history of antecedent dysentery is confirmatory, but, as has been emphasized above, the absence of such a history does not in the least exclude the possibility of amebiasis. Pain in the upper right abdominal quadrant is probably the most prominent symptom, and tenderness along the right costal margin is the most constant finding. The pain frequently radiates to the right supraclavicular region and is undoubtedly the result of involvement of the diaphragmatic pleura, which is readily explained by the fact that the majority of amebic abscesses are located on the convex surface of the liver in contact with the diaphragm. Manson-Bahr<sup>7</sup> emphasized this finding as most striking and characteristic and noted its presence in over one-half of a series of 43 cases. The presence of slight leukocytosis without concomitant increases in polymorphonuclear leukocytes casts a still stronger suspicion on the possibility of an amebic infection. As has been stressed by Rogers<sup>4, 6, 8</sup> and Manson-Bahr and Willoughby<sup>9</sup> there is only a moderate increase in leukocytes in amebic hepatic abscess as contrasted with the marked leukocytosis in pyogenic abscess of the liver. If, in addition to these findings careful examination of the stools reveals either active amebae or encysted forms, the diagnosis of liver abscess is justified. However, here, again, a negative finding does not exclude amebiasis as a cause of liver involvement. As a matter of fact this has been the more usual experience. Manson-Bahr<sup>7</sup> observed that amebae were present in the stools in only 2 instances in his series, and Chen et al<sup>10</sup> noted a positive finding in 34.1 per cent of their cases. In Gessner's<sup>11</sup> series of 56 cases of amebic hepatic abscess amebae were found in the stools in 7 (12.5 per cent). In our own series (1) it was positive in 36.1 per cent of those cases in which this examination was made.

Undoubtedly one of the most important and trustworthy laboratory aids in the diagnosis of liver abscess is roentgenography. There are two characteristic roentgenologic changes which,

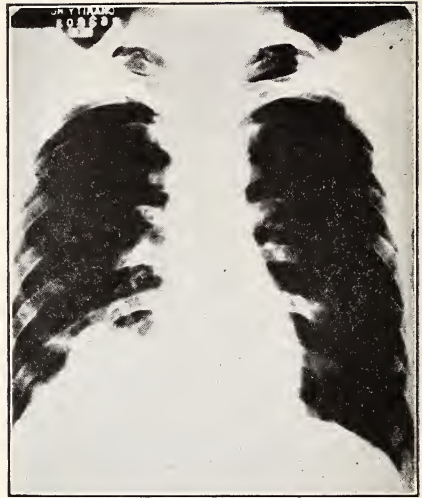


Fig. 1. Anterior posterior roentgenogram of chest and diaphragm in amebic abscess of the liver. Note distinct bulging of right diaphragm with pointing upward of the lower lung field.

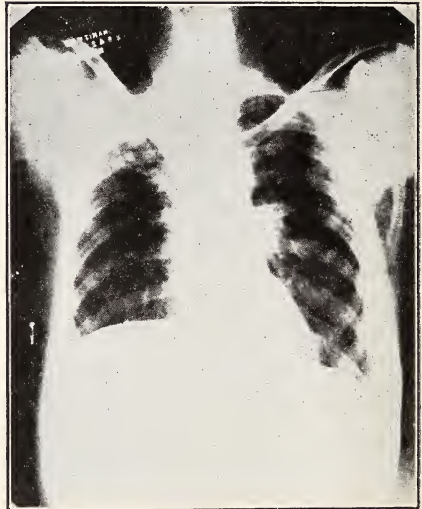


Fig. 2. Anterior posterior roentgenogram of chest and diaphragm in amebic abscess of the liver. Note characteristic elevation of right leaf of diaphragm and obliteration of cardiophrenic angle.



Fig. 3. Lateral roentgenogram of chest and diaphragm in amebic abscess of the liver. Note characteristic elevation of diaphragm and obliteration of anterior costophrenic angle.

in the majority of cases, reveal the diagnosis. The first of these concerns the significant elevation and immobility, usually of the right leaf of the diaphragm. Pancoast<sup>12</sup>, Dickinson<sup>13</sup>, and Love<sup>14</sup> have emphasized the importance of this, particularly as regards fluoroscopy, and examination of the patient in the upright position when such is possible. The characteristic changes in the contour of the diaphragm in liver abscess alone and in that associated with subdiaphragmatic suppuration have been clearly distinguished by Granger<sup>15</sup>. Almost pathognomonic of uncomplicated liver abscess is the distinct bulging of the diaphragm and pointing upward into the lower lung field; (Fig. 1) and although a gumma of the liver may produce the same picture, it occurs very rarely. Granger<sup>15</sup> has demonstrated that in subphrenic abscess complicating a liver abscess there is an obliteration of the cardiophrenic angle in the anteroposterior roentgenogram (Fig. 2) and obliteration of the anterior costophrenic angle in the lateral view, (Fig. 3) and that in subphrenic abscesses due to other causes there is an obliteration of the costophrenic angle in the

anteroposterior view and an obliteration of the posterior costophrenic angle in the lateral roentgenogram. Pancoast<sup>12</sup> has emphasized the diagnostic value of the lung reaction, which is frequently present and usually indicates an amebic infection. This is explained by the fact that the majority of abscesses occur on the convex surface of the liver in close contact with the diaphragm. That roentgen ray is of inestimable value in the diagnosis of amebic hepatic abscess is well exemplified in our own series reported elsewhere (1). The roentgen ray diagnosis was positive in 50 (87.7 per cent) of 57 cases in which this examination was made.

Exploratory aspiration of the liver is an important diagnostic procedure, and if "chocolate-sauce" pus is obtained, the diagnosis is definitely established. That this "chocolate-sauce" pus is pathognomonic of amebic abscess of the liver has been repeatedly corroborated by Constantini<sup>16</sup>, Chen et al<sup>10</sup>, and Manson-Bahr<sup>7</sup>. The site of aspiration would be inconsequential if it could be definitely known that the lesion is a non-secondarily infected liver abscess. However, since it is not possible to determine whether a liver abscess is not a pyogenic one, or if originally amebic, is not secondarily infected, it is much safer to assume that the abscess cavity contains pyogenic bacteria and the aspiration done in such a way that an uninvolved portion of the peritoneum or pleural cavity is not traversed by the aspirating needle. It is also imperative to perform the procedure in the operating room in order that strict surgical asepsis can be used; and if pyogenic organisms are found in the aspirated material, an immediate open drainage can be done. Immediately following the procedure a smear should be made of the aspirated material, and if a large number of pyogenic organisms is found, open drainage should be instituted. Ludlow<sup>17</sup> has emphasized the importance of not introducing the aspirating needle more than three to four inches, because of the danger of injuring a large vessel. Occasionally it is necessary to attempt multiple punctures before pus is encountered. Under these circumstances it is important to remove the needle entirely before reintroducing it, thus obviating extensive in-

jury to the liver which might result from changing the direction of the needle at the original site.

Undoubtedly the two most important factors in the reduction of the mortality rate in amebic abscess of the liver have been: (1) the introduction of specific therapy, emetine, both preoperatively and postoperatively; and (2) the general appreciation that amebic abscess of the liver are sterile and that every precaution should be taken to prevent their contamination with pyogenic micro-organisms. That the majority of amebic abscesses of the liver are sterile has been demonstrated by an analysis of a series of 386 collected and personal cases in which examination revealed sterile pus in 328 (83.9 per cent). It is imperative that these abscesses remain sterile and secondary infection be avoided by open drainage, as in non-infected tuberculous abscesses. Even as early as 1907, Rogers<sup>6</sup> emphasized the importance of this and diminished his mortality rate from 56.8 per cent to 14.4 per cent by the administration of ipecac and the institution of closed drainage. The inestimable value of closed drainage is undeniably demonstrated by the remarkably low mortality rate of 1.6 per cent reported by Chatterji<sup>18</sup>. Secondary infection invariably occurs following open drainage in spite of meticulous care being used to prevent contamination, and only by keeping the abscess cavity closed is there any possibility of maintaining the sterility of its contents. Manson-Bahr et al<sup>19</sup>, Thurston<sup>20</sup>, and Ludlow<sup>21</sup> have all stressed the advantages of aspiration of the abscess combined with emetine therapy. In our opinion this has been conclusively demonstrated by the contrasting mortality rates in a large series of collected cases including our own. In 4,035 collected cases including the 46 studied by us in which open operation had been performed, there were 1,908 deaths, a mortality rate of 47.2 per cent. In contrast to this, we have also collected 459 cases including 24 of our own treated by conservative measures; i. e., closed drainage and the administration of amebicides in which there were 32 deaths, a mortality rate of 6.9 per cent. (Fig. 4).

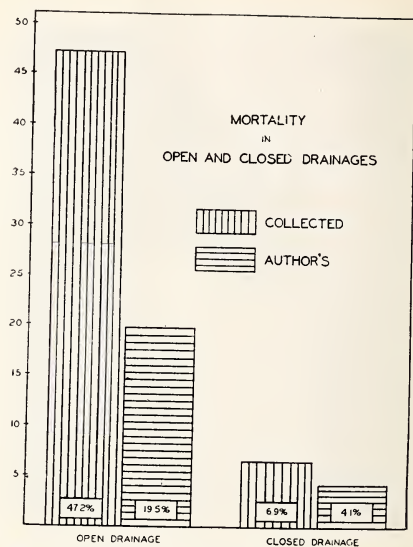


Fig. 4. Graphic representation of mortality in open and closed drainage. In a series of 4,035 collected cases, including 46 studied by us in which open operation had been done, there were 1,908 deaths, a mortality of 47.3 per cent. In a series studied by the authors in which open drainage was performed, the mortality was 19.5 per cent. In contrast to this, the mortality in closed drainage in a series of 459 collected cases, including 24 studied by the authors, was 6.9 per cent. In the series studied by the authors in which closed drainage was performed the mortality was 4.1 per cent.

Unless there is apparent danger of rupture of the abscess, every case of suspected amebic abscess should be given the advantage of a course of emetine therapy before any other procedure is used. Frequently in small abscesses no other therapy will be necessary. However, in the majority of instances emetine alone is not sufficient, and some measures should be used to evacuate the abscess contents. Emetine in 1 grain doses should be given daily from two to four days before operation, and after this preliminary emetine treatment aspiration of the liver should be done, preferably under local analgesia. Immediately after aspiration of the pus from the abscess an intramuscular injection of emetine should be given, because following the release of tension within the abscess, according to Rogers<sup>8</sup> and Talbot<sup>22</sup>, there occurs an exudation of lymph containing the injected emetine into the



abscess cavity. This should be administered in grain doses daily until from 6 to 10 grains have been given. Leake<sup>23</sup> has shown that emetine administered over any given period of time should not exceed 10 mg. per kilogram of body weight. Rinehart and Anderson<sup>24</sup>, working in Leake's laboratory, have emphasized the importance of caution in the administration of this drug, as it produces in the experimental animal severe injury to the cardiac muscle. Leake<sup>25</sup> is of the opinion that whereas other amebicides, acetarsone, carbarsone, treparsol, chinofon, and vioform, are safer and more efficient in the treatment of intestinal amebiasis, they should not be utilized in amebic hepatitis and liver abscess, as they themselves are toxic to the liver.

The technic and site of aspiration are dependent upon the clinical manifestations. The aspirating needle should be introduced directly over the mass in those instances in which there is some localizing sign, as pointing of the abscess. However, when any of these manifestations are absent, the aspirating needle should be introduced in such a way that the pleural and peritoneal cavities are not traversed. This can be achieved best by introducing the needle through the ninth intercostal space in the anterior axillary line and directing it upward, medially, and backward. Occasionally an abscess can be entered by introducing the needle below the twelfth rib and extending it upward anteriorly. Because the contents are sometimes extremely viscid, it may be necessary to utilize a trocar in order to evacuate the abscess contents completely. After emptying the abscess cavity it is neither necessary nor desirable to introduce any substance into it, as it has been shown by Rogers (8), Talbot (22), and Chatterji (26) that the use of irrigating solutions and amebicides is of no value whatever. A smear of the abscess contents should be made immediately, and if a large number of pyogenic micro-organisms is found, open drainage of the abscess should be done because of the secondary infection present; otherwise, open drainage is definitely contra-indicated.

#### SUMMARY AND CONCLUSIONS

1. Although authorities on amebiasis have known for a long time that the disease occurs ubiquitously, this well-established fact has only recently been generally appreciated.

2. Amebic hepatitis and abscess occur in a large percentage of cases in which no antecedent diarrhea had occurred.

3. Persistent enlargement of the liver associated with pyrexia and accompanied by pain and tenderness along the right costal margin in the presence of slight leukocytosis without concomitant increases in polymorphonuclear leukocytes is highly suggestive of amebic hepatitis and abscess.

4. Roentgenography is of inestimable value in the diagnosis of amebic abscess of the liver, and the aspiration of chocolate brown sauce pus from the liver is pathognomonic.

5. In view of the fact that a large proportion of amebic abscesses of the liver are sterile, aspiration of the abscess contents combined with subcutaneous administration of emetine is undoubtedly the best method of treatment. The only indication for open drainage is in those relatively few cases in which secondary infection has occurred. Aspiration should always be done in such a way that an uninvolved portion of the peritoneum or pleural cavity is not traversed by the aspirating needle.

6. The contrasting mortality in open and closed drainage is graphically illustrated by Fig. 4. In a collected series of 4,035 cases, including 46 the authors have studied, treated by open drainage, the mortality rate was 47.2 per cent as contrasted with a series of 459 collected cases, including 24 of the authors' own, treated by closed drainage, in which the mortality rate was 6.9 per cent. In the 46 cases studied by us in which open drainage was done a mortality rate of 19.5 per cent was obtained, whereas in 24 cases in which conservative treatment was used, there was a mortality rate of 4.1 per cent.

#### REFERENCES

1. Ochsner, Alton and DeBakey, Michael: Amebic abscess: An analysis of 73 cases: Part I, *Amer. J. Surg.* (In Press)
2. Ochsner, Alton and DeBakey, Michael: Diagnosis and treatment of amebic abscess of the liver: A study based on 4,484 collected and personal cases, *Amer. J. Digestive Diseases and Nutrition*, 2:47, 1935



3. Fitcher, Thomas B.: A study of cases of amebic dysentery occurring at Johns Hopkins Hospital, J. A. M. A., 41:480, 1903

4. Rogers, Sir Leonard: Tropical or amebic abscess of the liver and its relationship to amebic dysentery, Brit. M. J., 2:845, 1902

5. Craig, Charles F.: Amebiasis and amebic dysentery, Springfield, Ill., Charles C. Thomas, 1934

6. Rogers, Sir Leonard: Lettsomian lectures on amebic liver abscess: Its pathology, prevention, and cure. Lecture I: Etiology and pathology of amebic liver abscess, Lancet, 1:463, 1922

7. Manson-Bahr, Philip: Amebic abscess of the liver: Its diagnosis and treatment. A clinical study, Proc. Roy. Soc. Med. (Sect. on Trop. Dis. and Parasitol.), 25:233, 1931

8. Rogers, Sir Leonard and Megaw, J. W. D.: Tropical Medicine, Philadelphia, P. Blakiston's Sons and Co., 1930

Rogers, Sir Leonard: Tropical liver hepatitis and abscess, Practitioner, 131:117, 1933

9. Manson-Bahr, Philip and Willoughby, Hugh: On the leucocyte count in liver abscess, Tr. Roy. Soc. Trop. Med. and Hyg., 22:465, 1929

10. Chen, S. M., van Gorder, S. W., and Yuan, Y. K.: Amebic abscess of the liver, Nat. Med. J. of China, 17:391, 1931

11. Gessner, H. B.: A review of 96 cases of abscess of the liver, New Orleans Med. and Surg. J., 85:793, 1933

12. Pancoast, Henry K.: The roentgenological diagnosis of liver abscess with or without subdiaphragmatic abscess, Am. J. Roentgenol., 16:303, 1926

13. Dickinson, J. C.: Radiographic findings in hepatic abscess, amebic in type, Radiology, 4:273, 1925

14. Love, R. J. McNeill: Amebic abscess of the liver, Brit. M. J., 1:696, 1918

15. Granger, Amedee: Radiological signs of subdiaphragmatic abscess, New Orleans Med. and Surg. J., 82:748, 1930

16. Constantini, H.: De l'ouverture dans les bronches des abcès amibiens du foie, Arch. med.-chir. de l'appar. respir., 2:519, 1927

17. Ludlow, A. I.: Liver abscess. Report of 100 cases, S. G. and O., 36:336, 1923

18. Chatterji, K. K.: Surgical aspects of amebiasis, Indian Med. Gaz., 57:333, 1922

19. Manson-Bahr, Philip; Low, George C.; Pratt, J. J., and Gregg, A. L.: The treatment of liver abscess by aspiration, with account of 15 cases, Lancet, 1:941, 1923

20. Thurston, E. O.: Liver abscess, series of 64 cases, Lancet, 207:1008, 1924

21. Ludlow, A. I.: Treatment of abscess of the liver by aspiration and subcutaneous injection of emetine, China Med. J., 38:93, 1924

22. Talbot, Philip: Fifteen cases of liver abscess, Brit. M. J., 2:375, 1919

23. Leake, Chauncey D.: Personal communication

24. Rinehart, James F. and Anderson, Hamilton H.: Effect of emetine on cardiac muscle, Arch. Path., 11:546, 1931

25. Leake, Chauncey D.: Chemotherapy of amebiasis, J. A. M. A., 98:195, 1932

26. Chatterji, K. K.: Non-suppurative and suppurative hepatitis and splenitis of amebic origin, Indian J. Med., 1:250, 1920-21

## DISCUSSION

Dr. H. B. Gessner: Dr. DeBakey's splendid paper has left very little for me to say, but I wish to emphasize some of the points brought out.

First, regarding the incidence of amebiasis. A number of years ago, our friend Dr. Sistrunk working in the laboratory of the Mayo Clinic, made a number of examinations of stools and found amebiasis in patients from all over the country. However we have a considerably larger than average incidence in this section, and I think all of us should be amebiasis-minded and abscess-of-the-liver-minded.

Dr. DeBakey brought out an interesting point about right colon lesions being without symptoms of diarrhea which, of course, accounts for the number of cases who have abscess of the liver without diarrheal disturbance. In this connection, it seems to me to be important to insist on the careful teaching of methods of stool examination. In our hospitals a stool is sent to the laboratory and examined by an interne who has a great deal of other work but is depended on to make an examination for ameba. It seems unwise to rely on examination for ameba unless made by someone carefully trained over a long time. This organism is not easily recognized, that is why so many cases are reported negative; the stools are not examined by those properly trained.

In regard to aspiration, the warning is sometimes given to beware of aspiration in the stage of acute hyperemia of the liver. In one case known to me a rather large needle was used and a hemorrhage resulted; the patient eventually died of this hemorrhage. So far as aspiration doing harm otherwise, I have never seen it happen. I have not known infection to take place following aspiration, either in the pleural or in the peritoneal cavity.

Dr. DeBakey properly emphasizes the importance of making a precise diagnosis so that the case of purely amebic infection will be treated with aspiration and emetine, and not by open drainage with its resultant pyogenic infection. We are warned against giving too much emetine. One of our colleagues gives one grain the first day, two the second, three the third, two the fourth and one the fifth, in all nine grains of emetine in five days, and on one of these days three grains are given. This is dangerous because of the effect of emetine on the myocardium. Three grains in one day are too much. In this connection, another colleague who had been in the Philippines told me of his experience. He had amebiasis and emetine was given. Previously, he had been a tennis player, but after he had the emetine, there was no more tennis for him. He became very easily winded; his myocardium had been impaired.

CHRONIC ABDOMINAL DISCOMFORT  
IN CHILDREN\*

JOHN SIGNORELLI, M. D.†

and

HARRIS HOSEN, M. D.†

NEW ORLEANS

Among the more frequent problems that are brought to the physician who practices among children, none are more perplexing than that group of cases in children between the ages of three years and twelve years who complain of persistent abdominal discomfort or distinct pain without symptom-complex or physical findings sufficiently clear to indicate a definite diagnosis. Our attention was for some time directed to this clinical picture by the persistence of the complaint without concomitant findings to permit a diagnosis, and more especially by the fact that many of these conditions have been credited to pathology of the appendix and diagnosed as chronic disease of this organ, while others have been credited to pathology of the stomach proper or of the duodenum, or of both, with diagnoses of gastritis or gastro-duodenitis. We, of course, recognize and admit the existence of such conditions, but we have been forced by clinical experiences to conclude that many of these cases represent neither gastro-duodenal nor appendiceal pathology; we feel, in fact, that many such cases are submitted to surgery needlessly.

In attempting to ascribe a direct or specific cause of these symptoms we feel that the following possible conditions are the most logical to consider, namely:

1. Mesenteric lymphadenitis.
2. Chronic appendicitis.
3. The action of a heterogeneous intestinal flora.

Mesenteric lymphadenitis results from absorption of foreign toxins or bacteria via the intestinal tract. Formerly all enlargements of the mesenteric glands were regarded as tuberculous but in 1922 Heusser, after detailed ex-

amination of 40 specimens obtained at operation concluded that the majority were non-tuberculous. Worley<sup>11</sup> described three types of enlarged glands:

1. Discrete, enlarged, inflamed succulent glands usually occurring in children, and, as a rule, clinically simulating acute appendicitis. This occurs not uncommonly in tonsillar infections, as has been classically described by Brenemann<sup>19</sup>.

2. A mass of glands grouped around a caseous gland or a small abscess, clinically simulating acute appendicitis with abscess formation.

3. Terminal or healed stage of lymphadenitis—a single or several hyperplastic or calcified glands lying in the mesentery. Symptoms from this type simulate those of a duodenal ulcer, a renal calculus or a chronic appendix.

Irwin<sup>12</sup> states that this third type is often traced to a chronic appendix, abscess of the teeth, chronic tonsillitis, influenza and rheumatism, but this is all a matter of surmise. Symptoms are usually vague and often result in useless operations upon the appendix and gall-bladder; in 375 cases going to surgery he found 53 cases in which enlarged mesenteric glands represented the sole pathology. Generally, the symptoms caused by enlarged glands consist of vague abdominal discomfort, headaches, nausea and a feeling of malaise. Carson explains the abdominal symptoms of chronically enlarged mesenteric glands as being due to an irritation of the mesenteric nerves producing enterospasm.

The presence of these glands depends upon absorption from the gastro-intestinal tract, while the bacterial content of the tract is probably influenced by the so-called "gastric barrier," the efficiency of which appears to vary with changes in the concentration of the HCl of the stomach. Miller<sup>13</sup> showed that the idea that germs perish in the stomach is erroneous; he isolated 25 different bacteria from the mouth, 8 of which he found in the stomach contents, and as a result of his numerous experiments concluded that all bacteria which are swallowed at the beginning of a meal may pass alive into the intestine while of such as are swallowed during the second and third hours

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only those which are less sensitive to the action of acids retain their vitality and reach the intestine. C. H. Mayo (1913) reported that 87 per cent of 2406 gastric content analyses in cases of "stomach complaint" showed bacteria. From the examination of the psychic secretion from a patient with gastric fistula Burget<sup>14</sup> showed that when the acidity is normal relatively few bacteria survive, but when it is subnormal a variety survive. However, Kopeloff<sup>15</sup> found that in only one half of his analyses of stomach contents was there any correlation between high acidity and low bacterial numbers and vice versa, while Bartle and Harkins,<sup>16</sup> from observations on 200 patients, confirmed the bactericidal action of gastric juice though they also concluded that many bacteria in food and mucus remain alive. Davis<sup>17</sup>, realizing the prevalence of hemolytic streptococci in the throat, showed by introducing hemolytic streptococci in large numbers into the stomach of rabbits, that only occasionally do these pass to the feces; normal gastric juice from man or rabbit kills this micro-organism in two to five minutes. Harkins (1924) demonstrated that the greater the degree of free HCl the more germicidal is the effect on streptococci, B. coli and staphylococci, while B. acidophilus was killed in a medium of 90 per cent free acid in two hours. Experimenting with white rats, he also showed that B. anthracis and the bovine type of tubercle bacillus passed the "gastric barrier" and produced death of the animals.

Davis<sup>17</sup> emphasizes three factors influencing the effectiveness of the "gastric barrier", namely:

1. The number of organisms swallowed, this being influenced by the amount of saliva and the condition of cleanliness of the mouth and food.

2. The concentration of the HCl in the stomach.

3. The relative length of exposure to the gastric juice and the relative resistance of the individual organisms to acid.

Arnold<sup>18</sup> discusses some of the conditions influencing the "gastric barrier". Normally the reaction of the duodenum and upper jeju-

nem is slightly acid (Ph 5.2 to 6.5); this normal reaction depends on the acid material of the normal gastric secretion, and when the reaction changes to alkaline the usual obligate flora changes to a fecal type. The author introduced bacteria into the stomach (empty) of a dog 12-18 hours after a meal and found that none reached the cecum. Bacteria introduced in an alkaline solution, however, reached the cecum in large numbers over long periods in about the same concentration as the original suspension while those introduced in acid solutions reached the cecum in very small numbers.

In our desire to work out these problems of diagnosis we undertook a series of case studies which we carried not only clinically and through the usual routine laboratory procedures, but went into detail from the standpoint of gastric analyses, because we felt that this phase of laboratory investigation in this type of cases had not in the past been carried to conclusive ends. As in the case of most chronic disorders, much detail work is necessary in this type of cases and care must be exercised in the correct evaluation of each observation. Repeated analyses and careful comparison with the known normal are of prime importance. The normal acid content of the stomach is well described by Trumper and Canterow<sup>9</sup>; they state that the free HCl content of the residuum normally ranges from 0 to 30 with an average of 18.5. Using the Ewald meal in young individuals from 5 to 17 years of age, Wright<sup>1</sup> found the secretion about as in adults, while Klump and Neale<sup>2</sup>, in the examination of 80 children found no case of anacidity. Sauer, Minck and Alexander<sup>3</sup> report that in 21 children with anorexia (ages 1-2/3 to 11 1/2 years) 2 cases of anacidity were found, the average for the group being lower than in a series of 12 controls having normal appetites. Hess<sup>4</sup> found anacidity in 1 of 52 infants examined 1/2 to 18 hours after birth. Albu reported 31 cases of achylia in children under 10 years of age. However, histamine was not used, and furthermore, the subjects were not really normal as they were anemic, undernourished and of poor physique, and complained of weakness



and loss of appetite, evidently representing phases of malnutrition.

The use of the test meal to determine the function of the gastric glands is likely to cause confusion as repeated tests on the same patient may give findings that vary from an anacidity to a hyperacidity. Beaumont<sup>6</sup> found that anger, fear, fever, ingestion of alcohol and irritating condiments all temporarily check gastric secretion. It has also been shown that the sight, smell and taste of food, provided the subject has appetite, mechanical stimuli (distension of the stomach) and even suggestion under hypnosis<sup>8</sup> may lead to increased secretion. Because of these many and varied influences reacting on gastric secretion it is obvious that one can definitely differentiate between true and false anacidity only by the use of a controlled stimulating agent. A review of the literature shows that the only series reported where histamine was used as a stimulant is a series of 14 healthy children varying in ages from 4 to 14 years; this was reported by Dietrick and Shelby<sup>5</sup> and shows that free acid was found in every case.

In our laboratory investigations and studies of gastric acidity we utilized histamine as a stimulating factor to gastric secretion; free HCl was found in 23 cases, while 2 cases exhibited true anacidity. In our 2 cases histamine was given sub-cutaneously and aspiration of the stomach contents was made every 10 minutes until free acid appeared; in 1 case free acid appeared in 30 minutes, amounting to 12 and in 1 case it appeared in 60 minutes, amounting to 10. Because of these trivial amounts of acid we considered these 2 cases as of true anacidity.

From a practical standpoint true anacidity may be divided into two classes; first where on repeated tests no free acid is obtained even with the use of histamine; and second, where after the use of histamine there is only a slight output of free HCl. Our 2 cases of anacidity belong to this class. False anacidity, on the other hand, represents those cases which show no free acid with a test meal, but which respond with an abundant flow of acid under the influence of histamine stimulation. Those cases

which show only a small amount of acid after the third or fourth ten-minute period following histamine stimulation are always to be regarded as cases of true anacidity. Such cases are closely akin to those showing no free acid and both probably represent the same etiological factors. Therefore, in order to make a diagnosis of true anacidity each case suspected must be verified by the stimulating effect of histamine. Trumper and Canterow<sup>9</sup>, and Bloomfield and Poland<sup>10</sup> advocate histamine in the dosage of .01 mg. per kilogram of body weight. The latter investigators demonstrated in normal adults that after histamine stimulation the acid secretion of the stomach reached a maximum after the third ten-minute period, yielding a value of 80 to 90. Using the same amount of histamine Dietrick and Shelby<sup>5</sup> obtained about identical results in children.

Our series was made up of 25 children between the ages of 5 years and 12 years. They represented apparently healthy cases complaining of chronic abdominal discomfort or distinct pain as the outstanding symptom, with anorexia, constipation and lassitude as secondary in importance. Those cases with constipation, which might be the basic factor of the condition, were first relieved of the constipation by the use of mineral oil; no success, however, was obtained in relieving the main symptom, namely, abdominal discomfort or pain. Our clinical and laboratory findings are summarized in the following charts:

The data at hand led us to feel that these cases represent the results of mesenteric gland pathology or the symbiotic action of bacteria forming a heterogeneous intestinal flora. Therefore, theorizing along this line of thought, we undertook to apply empirically a procedure which would increase the HCl of the stomach, hoping thus to strengthen the efficiency of the "gastric barrier" which exercises so considerable an influence over the formation of enlarged mesenteric glands, and the creation of a symbiosis of the organisms forming the intestinal flora. It appears reasonable that the addition of HCl even to the normal stomach would hinder or entirely stop bacterial activity



No. of Cases	Average Age	Symptoms						Average Duration of Illness
		Physical Normal	Development Subnormal	Chr. Abdom. Discomfort	Vomiting and Nausea	Head-Aches	Anorexia	
25	8 yrs.	22	3	25	8	9	8	2 1/2 yrs.
Gastric Analyses								
Free Acid		Anacidity				Variations of Free Acid		
23		2				10 to 40		
Other Laboratory Findings								
Average RBC		Urinalyses			Stool Examination		Wassermann	
4,300,000		No abnormalities.			1 slight Hookworm		All negative	
					1 trichocephalus			

in these regions and overcome the symptom-complex.

Accordingly, despite the presence of normal acid values in the majority of the cases in our series, dilute HCl was prescribed in doses varying from 25 to 40 drops three times daily, to be taken diluted with water with each meal. Marked improvement with relief of all symptoms except anorexia in 4 of the 25 cases occurred with the adoption of this procedure. After one to two months of such treatment the acid was stopped, with no remissions of the symptoms. Many of the cases have now been free of medication for as long as 9 months without a recurrence of symptoms.

#### SUMMARY

1. Our observations indicate that there are many cases of abdominal discomfort or distinct pain in children in whom neither the pathology nor the therapy is surgical.

2. Such cases are due to mesenteric lymphadenopathy, the origin of which is the result of an abnormal heterogeneous intestinal flora.

3. The administration of dilute HCl reduces the number of bacteria that will pass the "gastric barrier" and thus prevents the development of an abnormal symbiosis with its resultant reaction on the part of the mesenteric glands.

4. While this treatment is somewhat empirical, the uniform beneficial results appeal to

us as being worthy of further study and application, and it is with this thought foremost that this contribution is offered.

#### REFERENCES

1. Wright, C. B., *Arch. Int. Med.* 38:435, 1924.
2. Klumpp, T. G. and Neale, A. V., *Am. Jour. Dis. Child.* 40:1215, 1930.
3. Sauer, Minck and Alexander, *Jour. A. M. A.* 79:184, 1932.
4. Hass, A., *Am. Jour. Dis. Child.* 6:284, 1913.
5. Dietrick, H. and Shelby, D. C., *Am. Jour. Dis. Child.* 41:1086, 1931.
6. Beaumont, "The Physiology of Digestion," G. Goodrich, Burlington 1847.
7. Lim, R. K. S., Ivy, J. E., and McCarthy, A. C., *Quart. Jour. Exper. Physiology*, 15:13, 1925.
8. Luckhardt, A. B., and Johnston, R. L., *Amer. Jour. Physiol.* 70:174, 1924.
9. Trumper and Canterow, *Biochem. in Internal Medicine*, W. B. Saunders, 1932.
10. Bloomfield, A. L., and Poland, W. S., "Gastric Anacidity," MacMillan Co., 1932.
11. Worley, W. B., *Tri-State Med. Jour.* 4:845-47, March, 1932.
12. Irwin, S. T., *Lancet* 2:1081-1082, Nov. 14, 1931.
13. Miller, W. B., *The S. S. White Dental Co., Phila.*, 1890.
14. Burget, J., 5:299-303, 1920.
15. Kopeloff, N., *Proc. Soc. Exper. Biol. and Med.* 19:119-121, 1921.
16. Bartle, H. J. and Harkins, M. T., *Am. Jour. Med. Sc.* 169:373-88, 1925.
17. Davis, W. J., *Jour. Infect. Dis.* 26:71, 1920.
18. Arnold, L., *Tran. Chicago Path. Soc.* 12:310, 1927.
19. Brennemann, J., *Amer. Jour. Dis. Child.* 22:493, 1921.

#### DISCUSSION

Dr. L. R. DeBuys: Two days ago Dr. Signorelli asked me to discuss this paper so that I have not had much time to go deeply into the subject. There is, however, much to be said upon chronic abdominal discomfort in children. I wish to compliment him on his presentation. Of course, one

can readily appreciate that so vast a subject cannot be gone into very extensively in so short a time as is allotted either in the presentation or the discussion at one of these meetings.

Etiologically the factors contributing to abdominal pain may first be divided into the acute causes and the chronic causes. These may be divided further into those contained within the abdomen and those that are remote.

Of the remote causes may be mentioned: (a) systemic disturbances, such as tetany, spasmophilia, etc; (b) constitutional diseases, as for example syphilis; (c) central nervous causes, such as brain tumor, meningitis, etc; (d) the intoxications and poisonings; and (e) inflammations, as for example pneumonia, and so on.

All of these conditions cause abdominal pain by producing something within the abdomen. This is so with brain tumor, tetany, intoxications, and so on, where gastric or intestinal spasm causes the pain. In pneumonia it is a reflex pain either diaphragmatic because the pneumonia associated with the abdominal pain is usually a basal one, or the abdominal pain may be of sympathetic origin and due to distension.

The causes within the abdomen which may cause abdominal pain may be divided into three groups: (a) those within the lumen of the stomach and bowel, as for example indigestion, alterations in secretions, etc; (b) those conditions in the walls of the stomach and bowel, as for example inflammatory conditions and ulcerations, and this would include appendicitis; and (c) those conditions outside of the gastro-intestinal tract, which would include the liver, gall bladder and spleen, besides the mesenteric glands and tumors and also those conditions arising from disturbances of the pelvic organs.

Dr. Signorelli has so thoroughly covered his subject that I have nothing further to add.

I do believe, however, that usually there is not sufficient investigation into the gastric function by gastric analysis in children and in infants. By not overlooking this method of diagnostic procedure undoubtedly many diagnoses may be made which otherwise would have been obscure and an unnecessary surgical "look in" avoided.

## A DISCUSSION OF THE ETIOLOGY AND SIGNIFICANCE OF MYDRIASIS\*

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Before entering into a discussion of the various causes of mydriasis, I think it not untimely to say that mydriasis is brought about in two ways, (1) by stimulation of the cervical sympathetic nerves which supply the radial fibres of the iris; (2) by paralysis of the oculo-motor nerves which supply the circular or constrictor fibres of the iris. The one may be called spastic mydriasis, the other paralytic mydriasis. Either type may be produced artificially by the use of drugs. Cocaine, for instance, produces spastic mydriasis and atropine produces paralytic mydriasis. Of course, there are several other drugs belonging to each class, spastic or paralytic, that will bring about mydriasis.

Dilatation of one or both pupils may be of small moment or of dire significance, depending upon the etiology.

Because of the fact that the cervical sympathetic nerves and the oculo-motor nerves are not limited to the eye proper but have a rather wide distribution, I find it difficult at times to give a correct diagnosis of mydriasis. That it is necessary to, at least, give a reasonable diagnosis in a reasonable period of time becomes manifest when a person of little or no poise or an anxious mother brings one of her children to you having this condition. Too, it has its medico-legal aspect—particularly when injuries to the head or eye proper are the points at issue. Again, the unilateral dilatation of the pupil is of value in locating an intracranial lesion due to pathology or trauma.

### CAUSES

One notices a dilatation of the pupils with reduction of light, during fright or other strong emotion, in myopic individuals and very often in hysteria. These are of but little import and the ophthalmologist is seldom ever consulted be-

\*Read before the Section on Eye, Ear, Nose and Throat at the Sixty-eighth Annual Session of the Mississippi State Medical Association, Biloxi, May 15, 1935.

cause of them. We are frequently consulted by individuals having dilated pupils due to the introduction of atropine into the conjunctival sac. This often occurs when the patient borrows a medicine dropper from a friend who has been using atropine solution, there being enough atropine adhering to the dropper to cause mydriasis. Too, one can get enough atropine in some hair tonic to cause mydriasis either by getting some of the tonic in the conjunctival sac or by absorption through the scalp following a brisk shampoo. Of course, any preparation of belladonna taken in sufficiently large doses will bring about the condition.

Patton<sup>1</sup> reports two cases of unilateral dilatation of the pupil due to the accidental entrance of a Jimson weed seed into the conjunctival sac.

We frequently see mydriasis in lesions of the central nervous system and most frequently in tabes and progressive paralysis.

The toxic principle of putrefaction of meat, fish, etc., is another cause.

Post-diphtheritic paralysis is given as another cause of mydriasis but is not so frequently seen, since the use of diphtheria antitoxin began.

Contusion to the eyeball sufficiently great to paralyze the sphincter iris is another cause.

The toxic principle arising in paranasal sinusitis, abscessed teeth and purulent tonsils are other causes.

In the Mississippi Delta we often see mydriasis due to quinine amblyopia. Of course, this occurs anywhere that quinine is given in large doses.

Of course, all of you are familiar with mydriasis the result of glaucoma.

Goitre through its stimulating effect upon the cervical sympathetic nerves should be mentioned. Incidentally, any other new growth along the distribution of the cervical sympathetic nerves will produce mydriasis if the new growth makes sufficient pressure on the nerve endings.

Tennett<sup>2</sup> reports a case of unilateral dilatation of the pupil caused by a small piece of steel which had entered the eyeball and become embedded in the iris. Usually a foreign body

in the eyeball causes a myosis. For this reason and because he could elicit no history of an injury to the eye he had the patient under observation a few months before making the diagnosis.

He stated that the nasal accessory sinuses were healthy, Wassermann test was negative, there was no change in the field of vision in either eye and tension of each eye was normal.

At the end of three or four months he noticed a yellowish-brown appearance of the iris of the affected eye while the iris of the other eye was a bright blue color. With a slit lamp he could see minute brownish-red granules scattered over the surface of the anterior capsule of the lens. These particles were invisible to ophthalmoscopic examination. Roentgenogram revealed a foreign body in the interior eyeball, well forward. Being unable to remove it with a magnet, a small corneal incision was made and iridectomy done at the point of the foreign body.

His explanation of mydriasis instead of the usual myosis is this: "The dilatation must have been due either to a selective chemical action of the metal upon the endings of the cervical sympathetic nerve or the dilator muscle fibres in the iris, or to a mechanical irritation caused by the foreign body on these structures. Probably the latter is the true explanation; the dilator fibres are situated immediately anterior to the two pigmented layers, and it would appear as if the foreign body, as well as dislodging some of the pigment, would irritate these muscle fibres, and cause a dilatation of the pupil."

Morgan<sup>3</sup> reports a case of dilatation of a pupil on one side followed in one month by dilatation of the other pupil with accommodation below normal. The blood and spinal fluid Wassermann tests were negative, vision always full, and the fundi and visual fields were normal. He thinks the etiologic factor in this case to be possibly a "forme fruste" of encephalitis lethargica.

Symond<sup>4</sup> reports three or four cases similar to that of Morgan and said that one of the cases proved to be an undoubted attack of encephalitis lethargica a few weeks later. How-

ever, none of the other cases showed any post-encephalitic sequelae of the usual type, which is an argument against admitting this pathology.

Rand<sup>5</sup> in writing of the unilateral dilatation of a pupil the result of head injuries says: "Regardless of the side of the head injured, even though the fracture can be demonstrated by x-ray, the haemorrhage is on the same side as that of the first pupil to become dilated and fixed." He reports seven cases to sustain his contention all of which were proved by operation or at autopsy.

Hollman and Scott<sup>6</sup> agree with Rand and report six cases, five of which were proved either by operation or at autopsy, the sixth case having died before any operative measures could be resorted to and did not come to autopsy.

All three of them interdict the use of a mydriatic in head injuries on account of its covering up a unilateral dilatation of the pupil, and they decry the use of morphine on account of its myotic effect and, too, because of its concealing signs of oncoming stupor.

Hollman and Scott call attention to the fact that a unilateral mydriasis is often of a transitory character in head injuries which demands accurate and oft repeated observations from the moment of injury.

#### BIBLIOGRAPHY

1. Patton, James M.: 1620 Medical Arts Bldg., Omaha, Nebraska.
2. Tennett, J. N.: Glasgow Medical Journal. 306-309, 1926.
3. Morgan, O. Goyer: Internal ophthalmoplegia with absent knee jerks. Royal Society of Medicine, May, 1931.
4. Symond, C. P.: Royal Society of Medicine, May, 1931.
5. Rand, Carl Wheeler: The significance of a dilated pupil in the homolateral side in cases of intracranial haemorrhage following head injuries. Arch. Surg. 1176-1189, 1929.
6. Hollman, Emile, M. D. and Scott, J., M. D.: Significance of unilateral dilatation and fixation of pupil in severe skull injuries. J. A. M. A., May 2, 1925.

#### DISCUSSION

Dr. W. A. Stevens, (Gulfport): Dr. Davis has covered the subjects well and I shall merely add a few personal observations.

Complete mydriasis and cycloplegia have nearly always, in my experience, been due to drugs. Some had used another's medicine for conjunctivitis, and this medicine contained atropine. One case claimed to have used only a patent eye water, but on stopping this the mydriasis cleared up. One case was

working in a wholesale house and had been handling a shipment of belladonna leaves.

I remember one case of mydriasis and cycloplegia that seemed to have been caused by eating tainted meat.

Mydriasis, of course, is found in complete blindness due to cessation of the stimulus to contraction of the sphincter iridis.

Unequal pupils are found not only in certain diseases and in injuries of the eye and head, but sometimes in anisometropia, and sometimes with no apparent cause. I saw one case who attributed the condition to the use of a mydriatic in an eye examination. Obviously it is advisable to notice and mention mydriasis in one or both eyes before instilling a mydriatic.

#### A COMMENT ON FOREIGN BODIES IN THE FOOD AND AIR PASSAGES\*

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*Preliminary Preparation.*—Contrary to the general opinion, there is a certain amount of preparation necessary for doing foreign body work. Every patient, old and young, should have no food for five hours and no water for two hours before peroral endoscopy is attempted. A very careful roentgen ray and general examination by an internist should always be made. While asepsis of the field is impossible, the mouth and teeth should always be cleansed thoroughly and all artificial dental work removed. As a rule, the relatives of the patient cannot understand why any preparation is necessary, and often are at a loss to know why one asks for a roentgenogram and a general physical examination. Even in non-radiopaque foreign bodies, such as a watermelon seed, a bean, or a grain of corn, the radiologist may, and often does, give the endoscopist valuable information as to the side on which the foreign body may be found: and the general examiner may also give valuable aid by making comparisons of the right and left sides of the chest. In the esophageal cases, it is most necessary to get rid of all possible content by regurgitation,

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especially if the patient is to be given an anesthetic, since in that case food particles lodged above the foreign body might be partially regurgitated during the anesthesia and sucked back into the larynx or trachea.

*Post-Operative Care.*—Just as important as the preliminary preparation also, is the post operative care. All patients, old and young should remain in the hospital for twenty-four hours or longer because of the possibility of laryngeal reaction. In young children, especially in cases of bronchitis from inspired kernels of nuts, beans, peas, watermelon seeds, fruit pits, and worst of all, peanuts, there is usually, as a part of the diffuse laryngotracheobronchitis, a swelling of the subglottic tissues. This causes croupiness and in a child under two years of age the swelling is often so great as to require tracheotomy for obstructive laryngeal dyspnea. For this reason very young children should always be kept in bed in the hospital under observation for two or three days, or longer if necessary, and it is not infrequently necessary following bronchoscopy. The fact that people often bring a child with a foreign body in the trachea or bronchus to the hospital expecting to have the necessary work done and return home in a few hours makes it extremely difficult for the doctor into whose hands the patient falls, and long explanation is always necessary. Then the people are still usually dissatisfied. At best bronchoscopy and allied procedure is the most delicate work and requires the most detailed care that the otolaryngologist has to contend with.

#### CASE REPORTS

Case 1. M. W., aged 2 years, with a history of cough and croupiness which began thirteen days prior to admission to the hospital. The mother was suspicious that this baby had swallowed a safety pin and after roentgen ray examination showed a closed safety pin in the trachea, it was decided by the parents that the pin had been present for thirteen days. There was a marked bronchitis present. With no anesthesia, the safety pin was easily visible through a small Jackson laryngoscope. The glottis was much swollen and very small. The upper end of the pin was grasped with a small forceps and removed without the introduction of a bronchoscope. There was no trauma except that caused by dragging the closed rather large safety pin through the glottis. However, the afternoon

of the same day the little patient became so dyspneic that a tracheotomy had to be hurriedly done. The following day the temperature went to 101.5°F., gradually it came down to normal on the fifth day. At this time the chest was perfectly clear. The tracheotomy tube was removed on the seventh day and the breathing through the larynx from this time on was good. The condition was so good the parents were told on the seventh day that the child could go home on the following day, but the temperature rose to 101°F., rapid hacking cough began and death occurred during the night. Autopsy could not be obtained and while there were no physical signs of this disease, it was assumed that pneumonia was the cause of death.

Case 2. E. B., aged 2 years, while eating watermelon a few hours prior to his admission, coughed and became dyspneic; afterwards there were several attacks of croupy cough. A 3.5 m.m. Jackson bronchoscope was introduced through a small laryngoscope and the watermelon seed was seen at the entrance to the right bronchus. It was grasped with a very small foreign body forceps and removed without anesthesia. There was no reaction, no rise of temperature and the patient was discharged after twenty-four hours. Four years later this little patient, now aged 6 years, gave her mother and father a history of having swallowed a watermelon seed four days before, since which time she had attacks of dyspnea and the breathing was much worse at night. On this occasion a watermelon seed was removed from the right main bronchus.

Case 3. M. H., aged 5 years, had attacks of dyspnea and coughing at intervals of a few minutes and told her parents that she had swallowed a safety pin. Roentgen ray examination showed a safety pin, several times curled on itself, at the entrance to the oesophagus. Under ether anesthesia the larynx was lifted forward with a laryngoscope and the pin quickly grasped and removed. There was no laryngeal reaction and the patient went home after twenty-four hours.

Case 4. B. R., aged 3 years, while eating watermelon thirty-six hours before admission to the hospital strangled and turned blue in the face. Since that time he had had several attacks of coughing accompanied by dyspnea. The foreign body could be heard to move with a slight cough. With no anesthesia the foreign body was seen through a 3.5 m.m. bronchoscope at the entrance to the right bronchus. It was grasped with a small forceps and removed with no difficulty. No reaction was expected but during the night dyspnea became so marked it was advisable to do a tracheotomy. The following day the temperature was 99.6°F., and the pulse rate 90. After four days the tracheotomy tube was removed and the child allowed to return home after one week. The trachea wound

was healed and there was no difficulty in breathing.

Case 5. M. M., aged 7 months; difficult breathing and cough with some rattling in the chest began two days before entering the hospital, while the mother was feeding the baby peanuts. The mother was sure the child had inspired a piece of peanut hull. Roentgen ray examination revealed an area of increased density about the lower right bronchus and examination by an internist indicated that there was some bronchitis in this area. A 3.5 m.m. bronchoscope was introduced through a small Jackson laryngoscope and the foreign body located in the right main bronchus. It was removed with no difficulty and a second search was made without removing the scope to see if any of the peanut kernel was present, but none was found. The 3.5 m.m. bronchoscope was introduced through the glottis with some difficulty and of course some swelling was expected. A tracheotomy was necessary about twelve hours later and the tube could not be removed without dyspnea resulting until the eighth day. The breathing then was somewhat difficult but did not necessitate reintroduction of the tracheotomy tube. The patient was discharged in good condition on the thirteenth day.

Case 6. J. S., aged 3 years, gave a history of difficulty in swallowing which began while eating fish about twenty-four hours before entering the hospital. Under ether anesthesia a fish bone was found sticking in the upper right posterior wall of the larynx. The foreign body was easily removed through a small Jackson laryngoscope. There was no trauma as only the epiglottis was touched with the instrument, so the child was allowed to go home as soon as he awakened.

Case 7. J. A., a fat, healthy sixteen months old boy was admitted to the Mississippi Baptist Hospital, Oct. 14, 1929. The mother was sure that the baby had choked on a dime with which he was playing. There was no vomiting and no dyspnea. Roentgenogram showed a large coin in the upper portion of the esophagus. The coin appeared to be about the size of a twenty-five cent piece, but though the patient's name was Abraham it hardly seemed that the interest could accumulate so rapidly, still we were sure it was not a dime. Under ether anesthesia the esophagoscope was passed gently and easily into the stomach and no foreign body located. A post-operative roentgenogram, made immediately afterwards revealed a foreign body in the stomach. Explanation of this is that the ether anesthesia relaxed the muscles and the coin was swallowed during the anesthesia. Two days later a nickel was passed and the boy is still held accountable for the nickel spent.

Case 8. R. S., aged 6 years, history of hoarseness of one week's standing which began while drinking juice from a watermelon. Auscultation in-

dicated that there were diminished breath sounds on the right side. Under ether anesthesia a 4 m.m. Jackson bronchoscope was passed and the foreign body noted just within the right main bronchus. The foreign body, a watermelon seed, was grasped with an ordinary small forceps and removed without difficulty. The whole operation required less than four minutes. The patient was hoarse but had no difficulty in breathing. He was allowed to leave the hospital on the third day and made an uneventful recovery.

Case 9. L. H., aged 34 years, history of having swallowed a piece of pork chop bone forty-eight hours previously and had been unable to swallow since then. The teeth were very poor, many of them broken, all of them carious. Under ether anesthesia several pieces of bone were removed from the first constricted area of the esophagus. While removing one rather large piece of bone with meat attached, the forceps lost the foreign body at the top of the larynx just as the patient inspired. The piece was too large to go between the vocal cords but fitted snugly on top of the larynx, so that no air could enter. While changing from the esophagoscope to the laryngoscope the patient became very cyanotic and a tracheotomy set was rolled up on a Mayo stand ready for use. However, the foreign body was easily removed as viewed through the laryngoscope and no further difficulties were encountered. A bougie was then passed into the stomach to see that there were no pieces lower down. From that time on the patient swallowed normally, had no more pain and his recovery was rapid and uneventful. He has since had all his teeth extracted and artificial teeth made in order that no such accident will happen again.

On one occasion a child was brought from Utica to my office. A tracheotomy was done immediately upon arrival as the child was at the time I saw her first, dead. A half of a large pecan kernel was removed from the trachea, but the child died of pneumonia a few days later.

On another occasion I saw a very young child that strangled while playing with a cracklin. This occurred late in the afternoon. The next morning a piece of cracklin was removed from the trachea but in twenty-four hours the child was dead of a rapid pneumonia.

I once heard the late Dr. Lynch say that peanut kernel was probably the most toxic foreign body he had met with. I would place first hog cracklin as the most toxic and second, pecan kernel.

Dr. H. F. Garrison once asked me to see a very young nursing infant. The mother of this child gave a very positive history of this baby, while playing with a blade of grass in its mouth suddenly choking, coughing and becoming very dyspneic. A very careful bronchoscopic exploration revealed nothing except a bulging into the right main bronchus from above. Past this bulging,

visibility was good and no foreign body was found. Temperature went higher, the child became sicker and in a week was dead. At autopsy very definite pathology was found.

#### DISCUSSION

Dr. D. C. Montgomery (Greenville): I am particularly interested in foreign bodies of vegetable origin because of the severe reaction they cause and because of the serious complications invariably associated with them; also because they usually are found in very young children.

One of the most interesting phases in the study of foreign bodies in the air passages is the reaction of the tissues to the type of foreign body present. Iron, steel, brass, silver and gold seem to be very slightly irritating to the mucosa and reaction to their presence is very slow. Jackson reports many cases of foreign bodies of this type in the bronchi from a few months up to twenty-six years duration. These cases eventually develop stenosis of the bronchus, scar and granulation tissue, finally abscess formation and the clinical picture of tuberculosis.

On the other hand vegetable substances produce a violent reaction within a period of a few hours—consisting of a severe tracheo-bronchitis, high fever, toxemia, synsnois, dyspnea and paroxysmal cough. Pneumonia comes on early and abscess much faster than in the metallic body cases. The younger the child the more severe the reaction.

About fifteen years ago Jackson made the statement that peanut kernels were the most dangerous of all organic foreign bodies, and set up the most prompt and violent reaction. He reported three cases that died within two weeks following refusal to permit bronchoscopic removal.

I wish to mention five cases of peanut in the bronchi, and one of pecan kernel. Five were in the right bronchus and one in the left confirming the well known fact that the right bronchus is usually the one in which the great percentage of foreign bodies fall into.

All these children were two years and under ranging in age from thirteen months to twenty-four months. One case had retained the peanut in its bronchus for four weeks and one for five weeks. Both showed a severe reaction, a large amount of accumulated pus in the bronchus and one a pneumonitis. All recovered fully.

## CONGENITAL HYPERTROPHIC PYLORIC STENOSIS\*

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NEW ORLEANS

Whenever the literature on any subject is reviewed, it invariably becomes evident that there is complete justification for the proverb *nil novi sub soli*. There is no exception in this instance, because notwithstanding the fact that it has been only in recent years that we have been able to reduce the mortality from congenital hypertrophic pyloric stenosis, there is evidence that it was apparently recognized as early as 1627.

In the early part of the present century, when interest was beginning to be awakened in discovering ways and means by which this condition could be relieved, Osler<sup>1</sup> discovered an article by Hezekiah Beardsley<sup>2</sup>, of New Haven, Connecticut, which was written in 1788. For many years this was considered to be the first case on record, and it may still be regarded as the most accurate description of hypertrophic pyloric stenosis in ancient literature. The most perfect account of Beardsley's case appears in "Pediatrics of the Past," which was compiled and written by my dear friend John Ruhrah,<sup>3</sup> who has just passed on after a life spent in the interest of the welfare of the child and in the development of Pediatrics. Beardsley's account concerns

" . . . a child of Mr. Joel Grannis, a respectable farmer in the town of Southington, who, in the first week of infancy, was attacked with a puking, or ejection of the milk, and of every other substance it received into its stomach almost instantaneously, and very little changed. The feces were in small quantity and of an ash color, which continued with little variation till its death . . . He died at the age of about 5 years.\* An account of the necropsy contains the following:—"The esophagus was found greatly distended . . . from one end to the other of this tube, between the circular fibres which compose the middle coat were vesicles, some of which contained

\*Read before the Louisiana State Medical Society, New Orleans, Louisiana, May 1, 1935.

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a table-spoonful of a thin fluid like water, and seemed capable of holding much more. I next examined the stomach which was unusually large . . . it contained about a wine pint of fluid exactly resembling that found in the vesicles . . . The pylorus was invested with a hard compact substance, or schirrosity, which so completely obstructed the passage into the duodenum, as to admit with the greatest difficulty the finest fluid' . . . "

\*Footnote: It seems extraordinary that this child should have lived from the first week of infancy, which is the time Beardsley states he first saw the case, until it was five years old. I have, however, given the account just as I found it.

During the past twenty years, however, three isolated and earlier examples of this condition have been discovered. John Foote,<sup>4</sup> who was also influential in the development of Pediatrics in this country, called attention to a case described by Armstrong,<sup>5</sup> in 1777. Then Still<sup>6</sup> discovered a case recorded by Christopher Weber,<sup>7</sup> in 1758, and Caulfield<sup>8</sup> found a case described by Blair,<sup>9</sup> in 1717.

Blair's case (1717) was a male infant, who at

"a month old was seized with a violent vomiting and a stoppage of urine and stool. Some time after both these became regular, but the vomiting still continued. He died at 5 months, very emaciated and weighing no more than 5 pounds. Post-mortem 'the ventriculus was more like to an intestine than a stomach, its length being 5 inches and its breadth being one inch . . . The pylorus and almost half the duodenum were cartilaginous and something inclined to an ossification.' "

Weber's case (1758) was a female, newly born infant.

" . . . sucked milk without difficulty, but soon after she had filled her stomach with this infant nourishment she returned it by vomiting. She died on the sixth day. Post mortem 'the pylorus was hard to touch like cartilage, and contracted. On incision its substance was seen to be thick, and the tightness of its contraction made the lumen smaller.' "

Armstrong's case (1777) was an infant, sex not stated,

" . . . suffering from 'watery gripes,' which died at about 3 weeks old. Post mortem 'I found most of the stomach . . . in the same tender state, but towards the pylorus the structure was firm enough as likewise that of the intestine . . . the stomach was quite distended with curdled milk and victuals . . . but the whole intestines were re-

markably empty . . . it looked as if the disease had been chiefly owing to a spasm in the pylorus.' "

Without doubt, when a new condition has been described, fresh examples always follow. As Brennemann has suggested, when a clinician sees a rare case he commonly becomes interested in finding other cases, and is soon rewarded in his search. Apparently this did not occur, because there were few other cases recorded in the eighteenth century. This is indeed strange, because in reviewing the work of Armstrong, John Foote found that in the 1777 edition of his book, four cases, three of which were in one family, were reported following the first case reported in 1767. In discussing these cases, Armstrong's remark that "perhaps cases of this kind are more frequent than is commonly supposed" proves that he knew about what he was talking. Anyway, as far as I can find, nothing of consequence occurs in the literature for nearly one hundred years, until Hirschsprung<sup>10</sup> presented two cases in 1888.

Still more recently, however, Kellett,<sup>11</sup> of the University of Durham, College of Medicine, in Newcastle-on-Tyne, has just discovered a case reported as early as 1627. This case was the result of an observation made by Fabricius Hildanus.<sup>12</sup> It seems that Hildanus was born in 1560, and died in 1634, "full of honors and greatly beloved by all who knew him." He practiced medicine in Cologne, in Geneva, Lausanne, and Berne. Dezeimeris,<sup>13</sup> who gives a list of all the chapter headings of his concilia, regarded him as the restorer of German surgery, and his works as being even then a "fecund source of instruction." They were translated into French in 1669, and his collected works went through at least four editions. It was in these works that a case was recorded under the heading of "*Observatio singularis de obstructone pylori.*" It concerns a small wasted child, six months old, referred to as the eldest son of Henry Ortho, Esq. From this observation it is apparent that the custom of counting chickens before they were hatched prevailed even at this early date. It is equally interesting to note that this early clinician attributed the obstruction of the pylorus to the fact that



the nurse or mother had for several days crammed

“a thick and viscid pultaceous feed . . .”

into the esophagus of this baby. He recorded that

“its innate heat had proved unequal to the task of digesting this pap sufficiently for it to admit of being passed on to the intestine at the right time.”

It was his belief that

“the pap became packed in the stomach to such an extent that the pylorus became obstructed so that all the child swallowed he vomited up again and nothing passed through his bowel. Owing to this, the little child became so weak that those in attendance considered him to be at any moment on the point of giving up the ghost. It was at this juncture that I was called in, and by the divine grace had the good fortune to cure the child.”

It is next particularly interesting to note the detailed description of just how “our people prepare the pap and how they cram it into our children.”

“They boil very pure farina of wheat or of spelt together with whole milk in a vessel until it goes into a thick and viscid pap; and in this as a rule they also mix some butter. Then the nurse or mother places the child supine on its back and with her right index finger takes up some of the pap and thrusts it into the mouth of the child; frequently, particularly when the child resists her, she thrusts it in as far as the fauces, so that willy nilly the child is forced to swallow the portion.”

He then goes on to describe “the very gravest symptoms which may occur in the stomach of a child being loaded with this inspissated pap.” Whether or not the case described by Hildanus was a true pyloric stenosis or simply an example of indigestion following overfeeding occurring in the practice of a surgeon knowing little of children, is a matter of conjecture. It appears, however, that a large portion of his practice was with children. There are a number of cases reported by him among children, which would justify the belief that he was thoroughly familiar with their disorders. This together with the title used to describe this

case would seem to indicate that he was dealing with a pyloric obstruction of some character.

Hildanus's opinion that the administration of a “thick viscid pap” caused the pyloric obstruction, and his forbidding the mother and nurse to use pap or any other food made from bread or cooked farina, is of more than ordinary interest when we consider that the use of thick cereals constitutes one of the principal parts of our present day medical treatment of the gastro-enterospasm which sometimes precedes the hypertrophy of the muscularis.

Our present knowledge may be said to date from the time Hirschsprung<sup>10</sup> described the condition as a medico-surgical entity in a paper read before a German Pediatric society in 1887. Little progress followed, however, until Finkelstein, in 1896, called attention to the presence of the palpable tumor. Shortly after this, the possibility of surgery in cases of this character was considered. Other successful stomach operations began to be reported, and many surgeons attempted to save these infants by operating upon them. The early operation, such as gastroenterostomy and occasionally pyloroplasty reduced the mortality to some extent, but for the most part it remained as high as 50 per cent. All realized, therefore, that some better surgical technic was desirable. No advances were made, however, until Rammstedt<sup>14</sup> was performing a Fredet<sup>15</sup> pyloroplasty, and the condition of the infant became so critical that the operation was stopped after the division of the pyloric tumor down to the mucous membrane, the abdominal wound was closed, and to the surprise of all the infant recovered. The Rammstedt operation, thus discovered, was universally and widely accepted as the operation of choice, and as a result, the mortality from surgery of cases of hypertrophic pyloric stenosis has been greatly reduced.

#### INCIDENCE

Among the listed etiologic factors of vomiting in infancy, pyloric stenosis, although one of the rarer causes, is sufficiently frequent to warrant its consideration as a possible cause of any vomiting during the first few weeks of life. In a recent analysis of 145 cases treated surgically, Wallace and Wevill<sup>16</sup> found that 125

were males and 20 were females, representing a preponderance of males over females of 6.25 to one. This striking preponderance of males, which is so universally recognized, is of great interest as it is difficult to understand why a congenital malformation such as pyloric stenosis should show such a marked affinity for the male sex.

In the following table, the place in the family is shown in the series:

TABLE I		
Place in Family	Cases	Percentage
1st	77	56.6
2nd	23	16.9
3rd	15	11.0
4th	6	4.4
5th	7	5.1
6th	3	2.2
7th	2	1.5
8th	1	0.7
9th	2	1.5
No record	9	

It will be noted that more than one-half were the first children, and 28 per cent. were from the second to the third pregnancies. In this series, there was no evidence forthcoming of more than one case in a family. However, mention is made by John Foote<sup>4</sup> that Armstrong records four cases in the 1777 edition of his book wherein three were in one family, and Varden,<sup>17</sup> after reviewing the literature and finding mention of pyloric stenosis in seven sets of twins, reports it in twins under his observation. In addition, Cockayne<sup>18</sup> has even more recently reported its occurrence in first cousins in which there was no consanguinity of parents in either case or no previous history of the defect occurring before in the family.

The incidence of hypertrophic pyloric stenosis has always been regarded as being rare in negro infants, and many writers have stated that when pyloric obstruction does occur, it is usually due to spasm. It is my impression that we should be very conservative in discussing racial incidence, excepting over periods of many years. In view of the fact that it has been only in the present century, and indeed in more recent years that there has been any orderly study of this condition, it is too early to reach any conclusions. In a series of about 15 cases,

which we have seen within the past 5 years, 3 of them have been negroes, and in all instances hypertrophic stenosis has been found when the abdomen was opened for observation. Two of these cases are shown in the illustrations.

#### ETIOLOGY

Formerly vomiting attributable to some obstruction of the pylorus in early infancy was regarded as being due to either an obstruction from the spasmodic constriction of the musculature of the pylorus or stenosis due to hypertrophic changes. Since roentgenology has been utilized in the diagnosis of these conditions, it has been found that the spasmodic contracture is in reality not confined to the pylorus, but involves a great portion of the stomach and the duodenum. For this reason, the term gastro-enterospasm seems to be more desirable in describing the condition. In addition, there is a tendency to believe that gastro-enterospasm and hypertrophic pyloric stenosis are not separate entities, but that they merely represent the early and the late phases of the same condition.



FIGURE I: Three peristaltic waves are visible on the abdominal wall of this negro child. The incidence of hypertrophic pyloric stenosis in negro infants has always been regarded as being rare. This case is one of three which have been observed by the author in the negro race within the past five years.

The true etiology has never been discovered, but several theories have been advanced. Some think that over-distension or continued over-stretching of the musculature from over-feeding, may start the gastro-enterospasm, which eventually may lead to the hypertrophy of the muscularis and thus become an

etiologic factor of true pyloric stenosis. This has never been determined, but Sauer,<sup>19</sup> who has been a consistent advocate of the medical treatment in general and the utilization of thick cereals in particular, considers that we cannot disregard the fact that if we can prevent the early spasmodic contractions, we may be successful in preventing stenosis due to hypertrophy. On the other hand, there are some who believe that hypertrophy precedes the spasm, but they have never put forth any proof to support their belief.

Another theory suggests the presence of a central reflex arc, the vagus supplying the motor fibers to the stomach proper, while acting in an inhibitory manner upon the pyloric sphincter. The sympathetic system supplies the impulses for tonic contraction of the sphincter. An error in the development of this arc would result in a contraction of the sphincter against gastric peristalsis. This theoretically results in an hypertrophy. This theory is to some degree upset by the fact that the tumor has been shown to be present early in embryonic life. We may conclude, therefore, that we have no definite information at the present time fully to explain the true cause of this condition.

#### SYMPTOMATOLOGY

Although at times referred to as congenital hypertrophic pyloric stenosis, it seems to be the consensus of opinion that the symptoms are usually not marked until after the second or third week of life. The two prominent symptoms which invite attention to the condition are projectile vomiting and constipation. The next symptom which follows shortly thereafter is the visible peristaltic wave. These waves always pass from left to right and should not be confused with peristaltic waves in the transverse colon, which pass in the opposite direction. In several series of cases the visible peristaltic waves have been observed in almost 98 per cent of cases of pyloric stenosis of any considerable duration. They are, however, not absolutely pathognomonic of the condition, as some gastric peristalsis may occur in excessive vomiting from other causes. As a rule, the waves are stimulated by feeding, either by giving plain water from the bottle or when at-



FIG. II-A

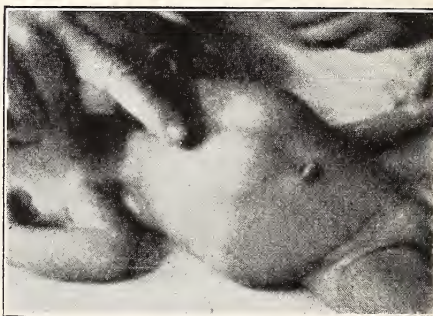


FIG. II-B

FIGURE II: (a) and (b)—The marked dilatation of the stomach is indicated by the unusual size of the waves in this case, originating at the cardiac end of the stomach and disappearing at the pyloric end, which is very much away from the median line. The tumor mass involved the musculature immediately adjacent to the pylorus on both the duodenal and stomach side. Prompt and uneventful recovery was effected by a Rammstedt operation.

tempting to give the regular food. The wave forms in the upper left quadrant and passes across the stomach and just before it disappears in the upper right quadrant, a second wave forms to follow it. Generally, two waves are seen at the same time and not infrequently three may be seen. Some idea may be formed as to the location of the pylorus by noting the point at which the peristaltic wave disappears, and at this point an effort is made to palpate the tumor mass, which is caused by the hypertrophy of the musculature. The tumor mass, which is about the size of a large olive, is most frequently found just at the lower border of the liver midway between the right mid-clavicu-



lar line and median lines, but its position may vary greatly. It is usually more easily palpated in the emaciated baby with the thin abdominal walls. Failure to feel the mass by no means rules out the existence of a pyloric stenosis, because very frequently it lies beneath the edge of the liver through which it cannot be palpated. Its discovery to some extent depends upon the skill and tactual sense of the examiner, but even then it usually is not discovered in from 40 to 50 per cent of the proven cases which have been recorded.

In severe cases a large proportion of the food taken is vomited and there is very little absorption of the water. Consequently the urine is scanty and of a high color and the infant becomes greatly dehydrated. As a great part of the food is lost by vomiting, progressive malnutrition occurs until finally the infant becomes atrophic. Infants with pyloric stenosis are usually constipated, but now and then a diarrhea may occur in which the stools are of the starvation type, consisting chiefly of mucus. The persistence of the vomiting results in a great loss of chlorides from the body in the form of hydrochloric acid, and to a lesser extent in the form of sodium chloride. This depletion of the chlorides may result in a severe degree of alkalosis with accompanying symptoms. Under such circumstances it is usually necessary to treat the dehydration and alkalosis before surgical intervention.

#### DIFFERENTIAL DIAGNOSIS

As has been previously stated, there is a growing belief that gastro-enterospasm and hypertrophic pyloric stenosis are merely phases of a single entity. In other words, the hypertrophy of the musculature, which eventually results in stenosis, is initiated by the spasmodic contractions. It is desirable, however, to determine whether we are dealing with the stage of gastro-enterospasm or with the true hypertrophy. In order to determine if the condition is one of spasm, it has become customary to administer atropine, bromide, or phenobarbital. If any results are to be expected, however, they should be given in sufficient amount early in the disease with the hope of relaxing the spasm factor of the obstruction. From one to

three drops of a solution of atropine sulphate made up by dissolving one-half grain of atropine sulphate in an ounce of water, is the customary dose. One to 3 drops of this solution may be given 3 to 4 times a day. If phenobarbital is used, one-fourth grain may be given in 3 or more of the feedings. If the vomiting is very severe, the atropine may be given hypodermically. If the condition improves it is then reasonable to believe that we have been fortunate enough in discovering the condition in the spasmodic stage.

Roentgenology is frequently a valuable aid in differentiating these phases of obstruction, and 3 to 4 hourly plates after the administration of a barium meal are very helpful in determining the emptying time of the stomach. It is quite generally conceded that if there is much more than 60 per cent. of the barium meal retained at the end of 3 hours, we are dealing with an obstruction caused by hypertrophy of the muscularis of the pylorus and surgical intervention usually offers the only relief. Vomiting may sometimes interfere with the roentgenologic examination, but paradoxical as it may seem, the barium meals are retained very much better than the breast milk or artificial formula.

When and if a tumor is palpable, the condition should at once be regarded as surgical and it will not be amenable to any medical treatment. Congenital duodenal atresia, which is a rare condition, is capable of producing symptoms which may be mistaken for pyloric obstruction, but when this deformity is present, symptoms occur earlier after birth and it is usually revealed by roentgenologic evidence of obstruction below the pyloric opening. Moreover, the material which is vomited is usually tinged with blue when the obstruction is in the lower part of the duodenum.

#### TREATMENT

In any case of suspected pyloric obstruction, medical and dietetic treatment should first be tried, but under no circumstances should it be continued unless some improvement is attained within a reasonable time. The administration of atropine or phenobarbital, as suggested,



is usually the first step in the medical treatment, and if effective there should be a decrease in the amount and frequency of vomiting and an increase in the fecal matter. Weighing should not be begun until improvement is somewhat advanced, because we should not expect any rapid gain in weight. On the other hand, if there is no improvement from medical treatment, we should weigh the baby to see if there is any rapid loss of weight. Thickened foods seem to be retained very much better than breast milk or ordinary milk formulae. If the patient is on breast milk, and it usually should be at the age when this condition is encountered, both breasts may be expressed with an electric pump or ordinary hand pump 3 or 4 times in 24 hours. This may be used in preparing the thickened formula, or if breast milk is not available, an evaporated milk formula or skimmed bottle milk formula may be used. Any one of these three may be made as follows:

## BREAST MILK FORMULA

Breast milk .....	12 oz.
Barley flour .....	3 level tbsp.
Dextri-Maltose .....	3 level tbsp.

## EVAPORATED MILK FORMULA

Evaporated milk .....	6 oz.
Water .....	8 oz.
Dextri-Maltose .....	3 level tbsp.

## SKIMMED MILK FORMULA

Skimmed milk .....	10 oz.
Water .....	10 oz.
Farina .....	6 level tbsp.
Barley water .....	3 level tbsp.
Dextri-Maltose .....	3 level tbsp.

Mix to a smooth paste, bring to a boil, then boil in a covered double boiler for half an hour, or until the warm mixture has the consistency of thick, whipped cream. The total volume should be about eight ounces, and the caloric value about 50 per ounce. During the first week, one ounce of this food should be given seven times in 24 hours for a seven-pound infant. A Hygeia nipple with an enlarged hole is satisfactory. The infant should not be taken out of the crib; the head-end of the crib should be elevated a few inches with the patient lying on the right side. At the completion of each

feeding an ounce of tepid water, normal salt or five per cent dextrose Ringer's solution should be given as a retention enema with a lubricated No. 14 F. catheter and small bulb. No water should be given by mouth during the crucial weeks. If dehydration is very marked, if the rectal fluids are not retained, and if there is a high fever or oliguria, a daily hypodermoclysis maybe necessary.

The importance of preventing dehydration is obvious, whether we continue the medical treatment or not, because it is our duty to deliver the patient to the surgeon so that some measure of success may be expected. Three solutions may be used: first, 0.85 per cent. sodium chloride; second, Ringer's solution; and third, Hartmann's solution. In the case of the first two solutions, the preparation is very simple. Tablets of the dry salts may be obtained from a number of pharmaceutical firms, and they simply need to be dissolved and diluted to the proper volume with sterile distilled water. The latter solution is obtainable in ampule form and merely requires dilution with sterile distilled water. These solutions may be given intravenously, subcutaneously, and intraperitoneally. It is beginning to be considered, however, that the use of intraperitoneal injections prior to any contemplated abdominal operation is absolutely contra-indicated. Ordinarily hypodermoclysis subcutaneously is quite sufficient. It should not exceed 100 to 200 cc. at a time.

If dietary measures are ineffective, and there is no improvement within 48 hours, the surgeon should see the patient, and should give the pre-operative orders. It is advisable to give no food by mouth for 12 hours before operation. If we have given the hypodermoclysis as often as indicated, we are usually able to turn the patient over to the surgeon in a satisfactory state, but if not, it should be given prior to the operation and sometimes immediately after. Whole blood may also be administered, but should not exceed 100 cc.

There is one impression that has been gained, and that is that we should not be quite so reluctant to turn the patient over to the surgeon as we were formerly. We should, however, refer the patient to a surgeon who has shown interest and a certain amount of skill in Pediatric

Surgery. Since the development of the Rammstedt operation, inspired by the previous pyloroplastic operation of Pierre Fredet, of Paris, the surgical risk has been reduced to a minimum and the expectancy for recovery is very high if the operator has acquired skill in performing this operation. Ethylene with a slight mixture of ether should be chosen if a general anesthetic is given, but the operation can and usually is performed very easily under a local anesthetic. I have not been convinced of the necessity of a general anesthetic.

#### POST-OPERATIVE TREATMENT

The post-operative treatment is mainly dietary and belongs to the pediatrician. Whether hypodermoclysis is to be repeated following the operation will depend largely on the degree of dehydration apparent by the loss of tissue turgor. If the baby has been properly prepared it is usually not necessary. If a general anesthetic is given, the head of the bed should be lowered until recovery from the anesthetic, to prevent aspiration of mucus. The patient may then be put in a semi-erect position until all food is retained. After a few hours a dropful of water may be given, and this may be alternated every two hours by about 4 to 8 cc. of expressed breast milk, and if this is not available, the same amount of a formula consisting of evaporated milk, 4 oz., water, 12 oz., and Dextri-Maltose,  $2\frac{1}{2}$  level tablespoonsful, should be given. This should be boiled for about 2 or 3 minutes in a single boiler. During the first 24 hours, the water may be increased gradually to an ounce, likewise food, in one-ounce portions, may be given six times in 24 hours. After a few days, the water should be omitted and the feedings increased to two ounces, then to three ounces. Aseptic nursing technic is desirable during the care of patients with pyloric stenosis. Colds and other infections should be avoided.

#### CONCLUSIONS

From the progress which has been made in recent years, there seems to be increasing justification for the belief that the gastro-enterospasm, which formerly was spoken of as pylorospasm, is an initial stage of a subsequent hypertrophic pyloric stenosis, which can be relieved only by surgery. Medical treatment, therefore,

if it is to be at all effective, must be instituted very early when the spasmodic contractions of the musculature are the underlying cause of the pyloric obstruction and resulting vomiting.

Medical treatment should not be continued too long, and if improvement does not begin within 48 hours, an early operation should be considered. The Rammstedt operation is the method of choice.

Pre-operative preparation and post-operative care are the most important factors in lowering the mortality in the surgical treatment of pyloric stenosis. Consequently, nursing by a skilled nurse before and after the operation is equally important.

#### REFERENCES

1. Osler, W.: *Arch. Pediat.*, 20:355, 1903.
2. Beardsley, H. K.: Cases and Observations by the Medical Society of New-Haven County, in the State of Connecticut, 1788. Cited by Ruhrah.
3. Ruhrah, John: *Pediatrics of the Past*, Paul B. Hoeber, Inc., New York, pp. 435, 436, 1925.
4. Foote, J. A.: *Am. J. Dis. Child.*, Chicago, 15:351, 1918.
5. Armstrong, G.: *An Account of the Diseases Most Incident to Children*, etc., London, 1777. Cited by Ruhrah.
6. Still, G.: *History of Pediatrics*, Oxford, 398, 1931.
7. Weber, G.: *Inaug. Thesis*, Göttingen, 1758.
8. Caulfield, K.: *Am. J. Dis. Child.*, Chicago, 40:1069, 1930.
9. Blair, P.: *Philosoph. Trans. Roy. Soc.*, London, 30:No. 353, 631, 1717. Cited by Kellett.
10. Hirschsprung, H.: *Jahrb. f. Kinderh.*, Berlin, 28:61, 1888.
11. Kellett, C. E.: *Arch. Dis. in Child.*, 8:325, 1933.
12. Hildanus, F.: *Opera Omnia*, Frankfurt, Joh. Beyerus, 1646. Cited by Kellett.
13. Dezeimeris, Ollivier, and Raige-Delorme: *Dictionnaire Historique de la Médecine*, Paris, Bechet Jeune, 2:252, 1828. Cited by Kellett.
14. Rammstedt, O.: *Med. Klinik.*, 8:1702, 1912.
15. Dufour H. and Fredet, P.: *Rev. de chir.*, 37:208, 1908.
16. Wallace, H. L. and Wevill, L. E.: *Brit. Med. Jour.*, 3834 (June 30) 1934.
17. Varden, A. E.: *Jour. of Ped.*, 3:494 (September) 1933.
18. Cockayne, E. A.: *The Lancet*, 898 (April 28) 1934.
19. Sauer, Louis: *Jour. of Iowa St. Med. Soc.*, 23:66 (February) 1933.

#### DISCUSSION

Dr. Alton Ochsner (New Orleans): Results in the surgical treatment of hypertrophic pyloric stenosis are obtained in so far as the attitude of the pediatrician is concerned by those individuals into whose hands the pediatrician has placed the patient in good shape. We are fortunate here in working with Dr. Strong and other New Orleans pediatricians in that we get these cases early, and as Dr. Strong emphasized to-day, we get them in good condition, so that there is no reason why we in New Orleans should lose a case treated surgically.

There are several things as regards the surgical treatment which might be emphasized. The only case which we have lost in a series of cases (approximately twenty) was one in which a general anesthetic was used. This was a case in which we attempted a transverse incision, thinking it might possibly be the better incision to use. In attempting to reduce the stomach and duodenum subsequently, it became necessary to give a general anesthetic. Local analgesia should be used in all cases. The incision should be made high in order that the liver can act as a barrier against the escape of the intestinal contents. With little difficulty, the stomach and tumor can be brought into the wound. We have learned something recently about the type of tumor. Instead of having a small tumor (Dr. Strong has alluded to this), the tumefaction may extend up on the wall of the stomach for a considerable distance.

We have had two cases in adults, one in a man of thirty-five and the other in a man of sixty-five, whose symptoms dated back to infancy. In both cases we found pyloric occlusion, both had hypertrophic pyloric stenosis. We found the Rammstedt operation could not be done and resected the anterior portion of the pylorus and did a gastroduodenostomy.

I want to emphasize what Dr. Strong has already emphasized, that so far as the surgeon is concerned it is a surgical responsibility if the case is turned over to him early. As I said before, there is no reason why any surgeon in New Orleans should lose a case of hypertrophic pyloric stenosis.

Dr. B. C. Garrett (Shreveport): I want to ask Dr. Strong if most of his cases were in boy babies, or what was the relative proportion of boys and girls? It has been my experience it occurs in boys more frequently.

Another thing, if bottle fed babies are not more often affected than breast fed, and if not a fact the great majority come in the first child of the marriage?

I might state that I have had the opportunity to do a few of these cases and got to look into one eight or ten years after operation as I had occasion to open the boy for another condition. He had a normal pylorus and you could hardly see the incision of the previous operation.

Dr. Cecil O. Lorio (Baton Rouge): I have had the opportunity of seeing a few of these cases. No one individual physician sees a great number except in connection with an institution, like Dr. Strong. I have had occasion to see ten cases and all ten of these cases had operation as early as possible. Most cases that I see in consultation or after had numerous formulae given without result and the general condition very bad.

As Dr. Strong pointed out, the most important feature is the pre-operative treatment. If these children are very dehydrated before operation the prognosis is much less favorable.

Of the ten cases I observed, two were of the same family and all of them were boys. One child was operated at the age of five weeks for pyloric stenosis and at the age of six months had true intussusception, operated and recovered.

I have observed the surgical procedure in each one of these cases and half were under general anesthetic and half local, however, they all survived. Even those under local, it seemed to make not much difference which surgeon was doing it, those who retracted too much on the pylorus would stop the baby from breathing.

One case not mention of the ten that I recall was one I had operated on for pyloric stenosis and due to lack of complete history, missed the diagnosis. The obstruction was about a half inch below the pylorus and happened to be a duodenal obstruction. If I had inquired further I would have been able to make a diagnosis, that is, about regurgitation of bile.

Dr. Robert A. Strong (In conclusion): The point which I wished to emphasize concerning congenital hypertrophic pyloric stenosis, was that the tendency to regard gastroenterospasm as the initial stage of hypertrophic pyloric stenosis seems to be attracting wider attention. Therefore, if medical treatment is to be effective, the diagnosis must be made in the spasmodic stage and should not be unduly prolonged before calling surgical consultation. If improvement does not begin within forty-eight hours, an early operation should be considered. It is my impression that the pediatrician has been deferring operation too long, with the result that the patient is not delivered to the surgeon in a condition even remotely resembling a good surgical risk. There is no question at the present time but that the Rammstedt operation is the operation of choice. I believe that the development of this operation together with a more sympathetic and cooperative attitude on the part of the surgeons, has been the principle reason for the comparatively low surgical mortality at the present time. The best results are obtained by team work, and the team should consist of a pediatrician who is open-minded enough to know the limitations of medical treatment and the point when the case becomes a surgical rather than a medical problem, and a surgeon who is interested in pediatric surgery and who possesses the skill to perform a Rammstedt operation.

I have had the opportunity of having Dr. Ochsner on the surgical side of such an arrangement, and I believe that we have both reached the conclusion that the low mortality which we have had in the surgical treatment of some of the cases which we

have seen together, proves the impressions which I have endeavored to give you today. The manner in which these children come through the operation and the ease with which they are fed afterward, is most gratifying.

I am glad that Dr. Garrett has been good enough to add his experiences, because I know of his interest in this phase of surgery and am familiar with the work that he has been doing in this connection in Shreveport. In answer to his question, I was unable to take up the statistics which touch upon the points that he has raised. When the paper is published, tables will be found to show the place in the family held by children subject to pyloric

stenosis, as well as the fact that six males are afflicted to every female. No one has offered an explanation as to why this is so. I have not made any observation as to whether the condition is more frequent in the bottle-fed as compared to the breast-fed infant. However, in view of the fact that most of the cases seen occur from the third to the sixth week of life, it would be reasonable to suppose that most of this age group would still be on breast milk. In our particular group, which was seen largely in the Newborn Service of the Hutchinson Memorial Clinic, most of the babies were on breast milk. As far as the etiology of the condition is concerned, at best we have only theories.



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## THE MISSISSIPPI STATE MEDICAL ASSOCIATION AND THE JOURNAL.

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With this number the New Orleans Medical and Surgical Journal ceases to be the official publication of the Mississippi State Medical Association. The Mississippi news and papers that are presented before the State Association at the annual meeting will no longer be in our columns. The friendly and cordial

relationship which existed for eleven years ceases with this date. It is with regret that the journal representatives saw the action taken by the State Association last year. Always it has been our pleasure and our earnest desire to serve our sister state to the best of our ability. We have felt that we may have made mistakes in the past but always we have tried to serve the Association of the Mississippi doctors wholeheartedly and conscientiously. However, the Association has felt that they prefer to have their own journal in which the material be devoted solely to the activities of the Mississippi doctors and to the papers of their State Association. In their new venture we wish the State Association good fortune and a happy future.

Because of our efforts in the past to enhance friendship between the two state associations we believe that we have made many friends for the journal in the Mississippi State Medical Association. It is our earnest hope that the doctors of Mississippi who have read the journal with profit, and perhaps with pleasure, will continue to have it served to them although it is no longer the official journalistic representative of their state association. We feel that the journal is a good journal without, we believe, being unduly boastful. The appreciation of the value of the journal is shown by the fact that it is sent to practically every large medical library in the United States as well as to innumerable institutions and libraries outside of this country. We feel that the scientific material is accurate and carefully selected, and lastly we are confident that the men who read the journal, with nearly one hundred years of service behind it, can keep abreast of the times.

To the Mississippi doctors we ask: Please continue your subscription and help to perpetuate the more than ten years of cordial, friendly relationship between the two associations. We are hoping to do our part by still maintaining a Mississippi News section in which there will be recorded the meetings, the social functions and other news items of interest.

## DIPHTHERIA PREVENTION IN NEW ORLEANS

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The first of this year a Committee was organized under the aegis of the Health Committee of the Central Council of Social Agencies to start a campaign to immunize the children of New Orleans against diphtheria. An active and enthusiastic group of people representing the medical profession of the city, the pediatric society, the Parent-Teachers Association, the public and parochial schools, the ERA, the City Board of Health as well as other organizations, was gathered together in order to further the purposes of the campaign. Active cooperation was obtained from the Catholic and Protestant institutions of New Orleans, from the schools and particularly from the Touro Infirmary, Charity Hospital, Hutchinson Memorial Clinic and the Child Welfare and Community Health Association. Through the efforts of the Committee and those who cooperated, 35,998 children were immunized against diphtheria. Of these 16,467 were immunized through the schools, representing 61 per cent of the total population under 12 years of age. The remainder were immunized through the Board of Health, institutions, hospitals and clinics in the city. A goodly part of the credit for the results obtained is due to the Federal Emergency Relief Administration which agreed to supply toxoid to the children in their care by an expenditure not to exceed \$10,000.

The results that have been obtained could only have been secured through the help of the physicians of New Orleans and the institutions with which they are connected. The total number of children immunized is probably very much in excess of the figures given, which represent only those children who obtained immunization through a definite agency or group. Undoubtedly there were some thousands of children immunized through the private physician.

The diphtheria rate in New Orleans should fall. In round figures nearly 40,000 children immunized against diphtheria should never develop the disease. The results will be followed with interest in the next few years. Unfortunately many of the children who were immu-

nized were of school age and pediatricians and public health officers recognize the fact that the child should be immunized in the pre-school period, preferably at the time they have reached two years in life. Dr. Batchelor, the head of the City Board of Health, has recognized this fact and has been instrumental in securing Governmental help in a project which will definitely list the number of children of pre-school age, and of school age, who have not been immunized. A house to house census is planned through the P. W. A. personnel. When this information is obtained it is then planned to carry on as a public health project, under the direction of the Board of Health, the immunization of the children of New Orleans who have not been immunized.

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## HEMATEMESIS AND THE SURGEON

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G. Gordon-Taylor, a surgeon of the Middlesex Hospital, discusses in a recent paper the very important symptoms of hematemesis and its relationship to surgical interference. In this article, teeming with facts and logically concluded, this surgeon calls attention to the failure of the medical man to take cognizance of the fact that surgical arrest of gastric hemorrhage is not only a measure which lessens the length of sickness of the patient but in many instances is a life saving measure. He stresses the point that prompt surgery is required in only one condition in which there occurs bleeding from the stomach and that is hemorrhage from chronic ulcer. Hemorrhages which occur as result of splenic anemia, gastric carcinoma, from essential thrombocytopenia, in disease of the gallbladder, or from an acute ulcer should not be operated upon hastily. It follows therefore that immediate operation for chronic ulcer should be immediate only in the sense that it should not be undertaken unless the diagnosis has been well substantiated by the clinical and radiologic evidence of ulcer or unless the patient's history is entirely typical and unequivocal. Occasionally, he observes, it may be necessary to operate on hemorrhage of acute ulcer, otherwise the indications are decidedly not for prompt

operation unless there is terrific bleeding or concomitant perforation. Early operation is indicated when the "drip-transfusion" is failing to control hemoglobin. The operation preferably should be performed as soon as a person has recovered from the anemia, that is to say when the hemoglobin has reached 90 per cent in a man and 80 per cent in a woman. When there are x-ray evidences of a large penetrating ulcer; when there is a long and definite ulcer history; when there is pyloric or duodenal stenosis; when there occurs secondary hemorrhage within a year after a probable ulcer history; in cases of severe bleeding when ulcer cannot be excluded and when carcinoma is likely to be present, delay in operation is fraught here, he says, with greatest peril.

The medical man should listen with attentive ears to what this authority has to say. Undoubtedly he who is not an operator is very much more likely to treat a patient with hemorrhage expectantly, or with medical measures, rather than giving due consideration and proper attention to the more remote effects of prolonged hemorrhage. There is an increased liability of unfortunate complications, prolongation of sickness and even death if surgical measures are instituted at a late date. The "first forty-eight hours is the optimum period for surgical attack in hematemesis."

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\*G. Gordon-Taylor: *The Attitude of Surgery to Haematemesis*. *The Lancet*, 229:811, Oct. 12, 1935.

## HOSPITAL STAFF TRANSACTIONS

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### TOURO INFIRMARY

On Wednesday November 13, 1935 at 8:00 P. M. Dr. Henry Blum presided over the regular monthly meeting of the Touro Infirmary Medical Staff.

A clinical pathological conference was conducted by Dr. Lanford from eight to nine P. M. The case presented was one of coronary occlusion with aneurysm of the left ventricle. Drs. Lemann, Eustis and Mates discussed the presentation.

Dr. M. Earle Brown had arranged for the showing of a sound picture on better eyesight. This was one of the means being employed in the campaign for the prevention of blindness.

Three cases of bronchogenic carcinoma were presented as a symposium on the subject. Various aspects of these cases were discussed by Drs. Lemann, Heninger, Weil, Womack, Teitelbaum and Lanford.

Willard R. Wirth, M.D.

### OSCAR ALLEN TUMOR CLINIC CHARITY HOSPITAL NEW ORLEANS

The scientific meeting of November was called by Dr. James T. Nix, Director. The essayist was Dr. R. H. Kampmeier, who presented the following paper.

#### DIAGNOSIS OF CARCINOMA OF THE BRONCHUS

Recent years have shown a marked change in the ideas regarding the frequency or rarity of bronchogenic carcinoma. Though some of the increased incidence of this form of malignancy may be apparent, due to the greater interest in the diagnosis on the part of the internist,—to the use

of the roentgen ray and bronchoscope, it is nevertheless true that there is also a real increase in the lesion. Necropsy statistics from large hospitals show an actual increase in the percentage of bronchial carcinoma as compared to malignant tumors of other organs. This is especially borne out by figures from some of the older European hospitals where routine necropsies have been done for years.

That bronchogenic malignancy is a disease to be reckoned with is shown by the fact that a report from one of the Hamburg hospitals indicates that this lesion stands second among visceral carcinomas at necropsy, and was found to be one-third as common as gastric cancer. Levinson (1) recently made similar observations at Cook County Hospital, Chicago. In his findings, carcinoma of the lung was found in eighty-four cases, standing second only to that of the stomach, found in one hundred and sixty-one cases.

Much speculation has been indulged in to explain the increased incidence of bronchogenic carcinoma in recent years. But since these are so diverse and unrelated, they will not be discussed.

The symptoms and physical signs may show great variation in the individual cases. Frequently, only one or two of the features may be present. At other times a variety of symptoms and signs may be found.

Weller (2) in summarizing symptoms and signs from a hundred clinical reports selected at random from the literature, groups them as follows, in order, from the most to the least frequent. These are: "cough; sputum, usually bloody or blood-streaked at some time; pain in the chest; dyspnea; loss of weight; osteo-arthritis, usually in the



form of clubbing of the fingers only; pleural effusion, often bloody; fever; venous engorgement, or edema or both, of the upper portion of the body; disturbances of the central nervous system; hoarseness; anorexia; paralysis of a vocal cord; dysphagia; nausea and vomiting; abdominal pain; inequality of the pupils; inequality of the radial pulses; pain in the arm; sense of pressure in the chest; cachexia; cyanosis; pain in the lower extremities; stertor; pain in the back; headache and chills". (To these I would add secondary anemia and often leukocytosis). In these hundred cases the symptoms which predominated were cough, being present in 61, sputum in 47, chest pain in 44, and dyspnea in 44; this in contrast to one instance each of the last five symptoms listed.

I have seen a moderate number of cases of bronchogenic malignancy and have at one time or another met with the majority of the symptoms and signs as given. It may be well to at least give my impressions with regard to the several most frequent symptoms as pointed out by Weller. The first of these, present in over 50 per cent of cases, is cough. This is often very distressing, especially when it is non-productive. Under such circumstances it may be of extreme annoyance to the patient because of its constancy. In others it may be a hard paroxysmal cough.

Sputum was the next most frequent symptom being present in 47 of the hundred collected cases. Often this is only mucoid, though it may be blood-streaked sooner or later in a high proportion of cases. Most of the cases in my experience have shown some blood-streaking. Funk (3) found hemoptysis in 45 per cent of 61 cases of bronchial cancer. Though fatal hemorrhage is rare, it does occur. In one of my cases, the bronchogenic carcinoma had become a necrotic mass with erosion of a good-sized vessel, and sudden death from hemorrhage. The sputum may be purulent when necrosis of a malignant tumor has occurred with abscess-like formation, or in the event that partial obstruction of a bronchus has led to the development of bronchiectasis distal to the side of the lesion.

Chest pain and dyspnea were found to occur each in 44 of the hundred cases. Pain may be over the site of the tumor or in some other part of the chest, or may be referred to an arm. If the tumor is in a main bronchus at the hilus, it not infrequently grows forward as a mediastinal tumor and as such, produces the dull, constant, boring pain as seen in aortic aneurism. If the growth extends outward to the periphery the pain is of pleural origin and is of the pleuritic type. The tumor may, by pleural extension, invade the intercostal nerves with segmental distribution of pain. Upper lobe cancers may involve the apical pleura and pain may then be referred to shoulder or arm, as in the case of a man seen in the Tumor

Clinic, who had been treated by his physician for over eighteen months for apparently an arthritis of the right shoulder. It was only after hemoptysis occurred that the correct diagnosis was suspected, and he was sent to this clinic. Extension via the apical pleura upward has caused neck pain.

Dyspnea is often characteristic. Some patients note this only on exertion. In others it is of a paroxysmal nature day or night and may at times produce orthopnea. One is frequently struck by a degree of dyspnea entirely out of proportion to the amount of pathology demonstrable in the lung physically or by roentgen ray. This, incidentally, also applies to cyanosis.

Of the numerous other symptoms listed above, I have noted almost constantly loss of weight, anemia and anorexia. Fever, and often leukocytosis are an evidence of secondary infection at the site of the lesion or an associated bronchiectasis.

Physically there may be varied findings. Inspection may show extensive localized collateral circulation, as in one case on our wards where an upper lobe bronchial cancer extended to involve the right innominate vein. There was extensive collateral venous circulation of the arm, about the shoulder, right neck and right chest. Usually there is some flattening and decreased expansion of the affected side.

Percussion may reveal pleural effusion found, upon tapping, to be bloody. In the absence of fluid the note over the site of the tumor is usually flat. This is found over the upper chest anteriorly when the main bronchus is involved, the note may then be resonant posteriorly. However, atelectasis of a whole lobe or a part of a lobe may be present if the tumor has obstructed the bronchus, then a flat note is demonstrated over the whole area involved by the collapsed lobe.

Breath sounds may be tubular over the area of dullness, especially if a tumor in a major bronchus has extended anteriorly. Again, there may be distant or even absent breath sounds if collapse of a lobe is present.

Bronchoscopic examination may be of invaluable assistance in the confirmation of a suspected bronchogenic carcinoma either because of direct inspection of the tumor or because of biopsy material.

Roentgenologic examination is usually of valuable assistance. Heacock and King<sup>4</sup> have recently discussed this aspect. They point out that in the endobronchial stage the roentgen ray examination is practically negative, though even here there may be some obstruction to the passage of air with obstructive emphysema, and indication for bronchoscopic examination. Later, when tumors have reached a peri-bronchial stage, a shadow is cast, typically at the hilus. Such a lesion may show an infiltrative picture with irregular borders, extending toward the periphery of the lung. Some



may be sharply localized lesions however. Though emphysema may be associated with an obstructive lesion it usually progresses to the more common condition of obstructive atelectasis, with the roentgen signs of this state. It might be added that I have found lipiodal and the roentgen ray of use in several cases, showing in this way, the definite site of obstruction of the bronchial lesion.

**Differential Diagnosis.** From a consideration of of the above discussion of symptoms and signs, it is evident under what circumstances a diagnosis of bronchial cancer should be entertained in a person within the carcinoma age.

**Tuberculosis.** Because of its frequency and the symptoms and signs which may be present it is obvious that this diagnosis is probably the most often incorrectly made in the presence of malignancy. Every active case of pulmonary tuberculosis will sooner or later show a positive sputum and this must make the diagnosis. The roentgen ray will be of help. Lesions of a lower lobe in older age groups should be regarded with suspicion as being tumor.

**Pleural Effusions.** Error is next most frequent in this group. Flatness over a tumor may simulate effusion. The exploring needle will settle the question. An effusion may hide a malignant process, but usually it will then be bloody. The roentgen ray may demonstrate the tumor after evacuation of the pleural fluid.

**Aneurism of the Aortic Arch.** In recent weeks, we have been vividly taught that bronchial cancer and aortic aneurism may mimic each other in all details. There were two cases, men of about the same age, presenting identical symptoms and signs. The roentgen ray examination showed in one a sacular aneurism of the descending arch of the aorta, in the other a tumor of the upper lobe major bronchus. The best tracheal tug the author has seen occurred as a result of peri-bronchial extension of a cancer to tie the aortic arch to the left bronchus.

**Abscess of Lung.** The differentiation of this from tumor may be impossible, for a cancer may break down with abscess formation with all of the cardinal symptoms, signs and roentgen ray data of such a condition. History of onset of the abscess may be of assistance. An abscess without apparent etiology in an older person should be suspected of a malignant basis. I have seen two abscesses of cancerous origin drained by cautery. In one it was unsuspected until microscopic study of a section of the abscess wall; in the other the true nature was recognized at operation because of the hard wall.

**Collapse of a Lobe.** Since bronchial obstruction with atelectasis may be part of the picture of bronchial cancer, the condition on another basis may cause difficulty in diagnosis. Physical signs may naturally be identical. Displacement of the mediastinal contents to the side of the lesion makes the diagnosis of atelectasis which may be true also

in tumor atelectasis, but may not be found if the cancer is hilar with extension to the fixation of perihilar tissues. However, atelectasis in an old person without other cause may raise the diagnosis of tumor as the etiology. Bronchoscopic examination may be necessary to clear the diagnosis.

**Tumors of Mediastinal Lymph Nodes.** Symptoms and signs of such conditions may simulate those of bronchial carcinoma. The roentgen ray will usually give the right clue.

Associated conditions, as tuberculosis, fungus infection rarely, as reported by Kampmeier and Black (5), may cloud the diagnosis in some cases.

In conclusion it should be emphasized that carcinoma of the bronchus must not be thought of as a rare condition, not to be diagnosed clinically. Instead, such a possibility should always be kept in mind in any case in which pulmonary symptoms and signs make themselves manifest in the older decades of life.

#### BIBLIOGRAPHY

1. Levinson, S. A.: Report at American College of Physicians, Annual Clinical Session, Chicago, 1935.
2. Weller, C. V.: Pathology of certain signs and symptoms in primary carcinoma of lung; illustrative cases. *Ann. Int. Med.* 2:725, 1935.
3. Funk, E. H. Clinical manifestations of primary bronchial carcinoma. *J. A. M. A.* 95:1879, 1930.
4. Heacock, C. H. and King, J. C.: The diagnosis of primary carcinoma of the lung. *Radiol.* 24:452, 1935.
5. Kampmeier, R. H. and Black, H. A.: Pulmonary aspergillosis in association with bronchial carcinoma. *Am. Rev. Tuberc.* 30:315, 1934.

#### J. T. NIX CLINIC NEW ORLEANS

At a meeting held in November, Doctor Alfred E. Smith presented the following paper.

#### MOTTLED ENAMEL

The study of mottled enamel has thrown some very illuminating evidence upon the controversy as to the integrity of enamel, particularly that phase of it which is based upon the character of the tooth itself.

What do we mean when we say that a tooth is "poorly calcified", assuming in reference to the enamel? It may be one of two things: either that the enamel rods themselves have a low lime content or that the cementing substance between the rods is inferior.

Considering that aside from gross defects as so-called "Atrophy", mottled enamel is, from the standpoint of calcification, the worst and poorest enamel of which we have any knowledge, and yet its susceptibility to the onset of the carious process is no

greater than in what we may term normal enamel. Frequently there is a curious absence of decay in cases of mottled enamel.

It is generally accepted that the poisonous action of fluorine which is present in the water supply used by the affected persons is responsible for mottled enamel.

#### BROWN STAINS

In regard to the brown stain of mottled enamel, we find that in the early consideration of this enamel, defect and before it was realized that the fundamental damage was the absence of the cementing substance between the rods, and also to the rods themselves, the condition was variously termed "Brown Stain." Later, however, with a better understanding of the real defect, the name "Mottled Enamel" was given to it by Dr. G. V. Black.

The iron content of water was at one time believed to be responsible for such stains, but this theory was eventually disproved. There has been some controversy as to whether or not it is really possible to stain the structure of the enamel rods unless the rods have been previously damaged in some such way as decalcification. As bearing on the present subject, that is, the relation of the "Brown Stain" to the mottled enamel, it is through interference with either the ameloblasts or the stratum intermedium, resulting in the absence of the cementing substance and damage to the periphery of the rods—the impregnation of any material such as the "Brown Stain" would be impossible.

The question as to the route through which the pigment gains lodgment within the enamel such as from within or without is interesting. Through experiment on dogs, trypan-blue was injected into the peritoneal cavity at the time when the enamel was forming, and in which the trypan-blue was permanently lodged within the enamel tissue upon the eruption of the teeth. On the other hand, in the same procedure made after the enamel had been formed the blue stain failed to appear in the enamel. This would argue that pigmentation of the enamel must occur during the formative process of the tissue.

#### WHY FILL NEWLY ERUPTED TEETH THE CAUSE OF THE RAPID DECAY OF OCCLUSAL ENAMEL FISSURES

Enamel is the hardest tissue of the body; it therefore admirably fulfills its function of protecting the teeth against both abrasion and decay. Microscopic examination of the very common enamel fissures definitely shows that the enamel of these areas is imperfectly calcified and, in rarer cases is even absent.

The danger of the enamel fissures to the teeth is not only that the dentin is sometimes slightly exposed, but more seriously that enamel fissures allow the indefinite retention of food debris.

Clinically, as well as histopathologically, enamel fissures must be considered as definitely predisposing the teeth to decay.

Food debris, in the diet of civilized nations is usually composed of a much too high percentage of carbohydrates; this ferments readily and produces lactic acid.

Clinical observation shows that occlusal enamel fissures decay more readily than those found on the buccal, or lingual surfaces of molars, and the lingual surfaces of maxillary lateral incisors. This clinical observation reveals that the buccal and lingual surfaces do not receive as much direct stress of mastication, and therefore the acid is not pumped into the interior of the tooth in the same manner as it is in occlusal fissures.

It is a long established fact that the approximal areas of the teeth are usually not so prone to dental decay as the occlusal surfaces. This is due to three factors: (1) to the well calcified, smooth enamel of the approximal areas; (2) to the lack of fissures or defects on these surfaces; and (3) to the indirect angle of the force of mastication.

Fissures are as defective in their enamel structure on the lateral surfaces of the teeth as on their occlusal surfaces. Therefore this does not explain their different reaction to decay, however the determining factor in this different reaction to dental decay is the force of mastication. Enamel fissures contain a soft gelatinous mass, the mucous plaque, composed of finely divided food debris and mucus. Lactic acid is formed through fermentation of carbohydrate foods in and under plaques, these plaques seal the orifices of fissures, thus retaining much of the acid, and preventing its dilution with saliva. Occlusal fissures of molars and bicuspid are exposed to the direct force of mastication. This stress alternately compresses and distends these plaques with their acid content, the plaque sealing the orifice of the fissure is only slowly permeable. The acid cannot escape into the mouth and is therefore literally injected into the dentin at the base of the fissure.

Enamel fissures on the lateral surfaces of the teeth on the other hand, are not subjected to the direct stress of mastication. Therefore the acid is not forced into the depths, hence these decay less often and less deeply than enamel fissures on the occlusal surfaces. The occlusal surfaces of deciduous and permanent teeth therefore should be critically examined for enamel fissures soon after their eruption. If any possibility for food retention is found by the use of a fine explorer, these areas should immediately be made immune by grinding and polishing or fillings placed.

The practical conclusions to be drawn from these so often reiterated observations are the following:

(a) The slightest break on the occlusal surfaces of molars and the bicuspid where the direction of

the rods is inclined inwards (conelike), may conceal a considerable cavity in the interior. This explains the cause of the frequent surprise of clinicians in opening apparently minute cavities of these teeth.

(b) Caries on the smooth surfaces of the enamel, on the other hand, always has its greatest extension on the surface of the tooth and its depth may consequently be fairly well gauged by the size of the orifice of the cavity. Clinicians are therefore rarely surprised at the depth penetrations of this class of cavities.

A fissure is an opening in the enamel. This opening is a vulnerable or weak spot. Its presence makes this place susceptible and liable to decay, no matter how well or strong the individual may be. It is impossible to keep these fissures clean and they are always potential centers of decay. It is therefore quite logical to maintain that fissures are the primary cause for the susceptibility of certain surfaces of the teeth to caries. Constitutional conditions, environments, or certain regions of the mouth play a secondary and less important part in the decay of erupted teeth.

After the eruption of the tooth no diet can change the form or shape of fissures. No mouth hygiene can protect these places against the destruction of bacteria. Once the bacterial plaque is safely lodged within these openings, decay will surely follow.

#### WHAT IS AND WHAT IS NOT A FISSURE

A vast majority of fissures are either incompletely or defectively calcified. There can be no such thing as a calcified fissure, either complete or incomplete. A fissure is a disunion or gap, it is an opening or hole in the enamel. It may extend all the way through the enamel to the dentin or only part way.

We can speak of incompletely calcified cusps or defectively calcified enamel, because both have substance and form. The reason for the limited and retarded adoption of prophylactic odontotomy has been largely due to the misconception or incorrect mental picture of what constitutes a fissure.

The universal practice of making fissures immune either by broadening and polishing or filling before decay can start will only be possible when all dentists have a clear and definite understanding of what a fissure really is. We must learn that our service is needed before caries is seen. If we aim to find carious cavities, we shall have no time to practice preventive dentistry. Looking for caries, we should train ourselves to look for pits, fissures or deep narrow grooves, knowing full well that each and every one of these places will become a carious cavity unless immunized or filled.

When parents begin to take care of the teeth of their children at a sufficiently early age, the future

history of the development of dentistry will begin to change.

#### MERCY HOSPITAL

Regular monthly meeting of the Mercy Hospital staff was held Wednesday, November 6, 1935, Dr. Jos. E. Brierre presiding. The scientific program consisted of the discussion of three deaths.

The first case was that of a patient that was brought to the hospital October 7, in an unconscious state, Resp., 16 Pulse, 164, Temp. 100.6 degrees, Pupils equal, did not react to, light, perspiring freely. On the morning of the eighth at 2 a. m., he went into convulsions, his heart became irregular, he foamed at the mouth and at about 4 a. m., he had a second convulsion and then died. Autopsy showed extensive hemorrhage with many large clots were found about the base of the brain. In the posterior fossa there was a firm extra-dural mass firmly attached to the dura, which occupied a position on the left wall of the temporal bone corresponding to the inside of the mastoid and extending anterior into the sphenoid.

Anatomical diagnosis:—1. Extra-dural posterior fossa tumor with hemorrhage at the base of the brain (endothelium).

#### 2. Internal hydrocephallus.

The second case was that of pneumonia patient who was very sick when admitted with rapid pulse and respiration, markedly cyanotic, the blood count 15,000 on admittance October 5, the sputum showed staphylococci and streptococci and types 1, 2, 3.; total whites went up to 21,000 on the third day, and on the fifth day 26,000. On the fourth day after admission patient became very much worse and died on the fifth day. Autopsy revealed the following: (1) Bronchopneumonia, (2) Emphysema of right pleura, (3) Chronic fibrous pleurisy, (4) Chronic myocarditis with hypertrophy, (5) Passive congestion of liver and spleen, (6) Chronic interstitial nephritis, (7) Aortitis.

The third case was that of a man who was admitted in a semicomatose condition with Cheyne—Stokes breathing, enlarged liver and spleen, edema at base of both lungs, rales at the apex of the left lung, urine analysis showed 4 per cent albumen, few hyaline casts and blood. Patient was given intravenous injection of 50 per cent glucose, patient became progressively worse and died following a convulsion two days after entering the hospital. Autopsy revealed the following, (1) Bilateral bronchial pneumonia and edema of the lungs, (2) Healed tuberculosis of apex of left lung, (3) Toxic myocarditis with hypertrophy, (4) Passive congestion of liver and spleen, (5) Chronic nephritis, (6) Bilateral pleural effusion.

R. A. Oriol, M. D., Secretary.



## FRENCH HOSPITAL

A regular meeting of the French Hospital Staff was called to order Friday, November 8, 1935, at 8:00 p. m. with Dr. Ader presiding.

The deaths having occurred during the preceding month were discussed. Dr. Ader and Dr. Harris presented the death of Mrs. F. D., age 66, which proved to be of much interest, due to the fact that she at such an advanced age had an ovarian abscess. Dr. Anderson originally called attention to the fact that the case was striking, because of that reason. Dr. Harris explained that infection probably occurred by hematogenous route with the organisms infecting the place of least resistance, which in this case was the old diseased ovary. Dr. Baron explained that the patient was moribund before operation, but that the operation was effected with the hope of giving her every chance and that nothing more was done, except to open the abscess and drain under local anesthesia.

Dr. Strange then discussed the death of his patient, on whom an autopsy was performed. The autopsy finding showed the heart to be extremely enlarged, the organs gorged and hemorrhagic, the coronary arteries calcified and the lungs filled with fluid. The death was manifestly due to old age.

The paper "The Value of X-Ray for Diagnosis of Pulmonary Tuberculosis in Children" was presented by Dr. Ane with lantern slide demonstration of chest plates taken from his cases. The paper showed the value of x-ray in tuberculosis of children and the early breakdown of the trachea and lymph nodes without associated clinical signs and symptoms. Another important point brought out was the danger of whooping cough or broncho-pneumonia in a chest with actively infected tuberculous lymph nodes, and also the allergic effect of repeated doses of tubercle bacilli.

The paper was discussed briefly by Dr. Menville. He pointed out the necessity for x-ray to establish early diagnosis.

In the presentation of interesting cases, Dr. M. J. Lyons discussed a case of his with a large tumor mass to the left of the epigastrium, but not connected to the stomach and apparently not attached to the liver. Because of the fact that the case was not completely worked up the discussion was deferred to another date.

The application of Dr. E. Lubritz was accepted by the membership committee.

N. J. Tessitore, M. D., Secretary.

## HOTEL DIEU

The regular monthly meeting of the Hotel Dieu Staff was held on Monday, October 21, 1935 at 8 p. m. sharp in the Nurses's Lecture Room, with the President, Dr. Val H. Fuchs, presiding.

The Scientific Program consisted of "A Case of Adenocarcinoma of the Right Adrenal Gland with

Symptoms of Addison's Disease" by Dr. J. M. Perret.

The patient was admitted to Hotel Dieu on April 4, 1935 and died in the institution on September 16, 1935. His present and final illness began in January, 1935, with fever in the afternoon and at night, cough and expectoration and night sweats. He was treated for a left side pleurisy and although the pleural symptoms improved the fever continued and he remained weak. He suffered from an attack of hemoptysis a week before his admission to the hospital. His past history was excellent: he never suffered from any serious illness nor had he been operated on. The family history was negative.

Physical Examination: Height, 5 ft. 7 in., weight about 110 pounds. Temperature, 100, Pulse 92, Respirations 24, Blood Pressure 120-75. The general appearance was very bad. The patient was very weak and greatly emaciated. The skin was of a peculiar color, yellowish black or perhaps bronze. Scattered on the chest were numerous melanotic moles. The extremities were negative. Chest: Heart was rapid. Aortic second sound. The peripheral arteries showed marked arteriosclerosis. Lungs: Peribronchial infiltrations of both lungs. Dullness and diminished breath sounds at the left base. Abdomen: The abdominal wall was relaxed. The liver was just palpable. The other viscera were not felt. (4-25-35).

A pleural friction sound was heard in the left infra-clavicular space and high pitched breath sounds over right infra-clavicular space on August 21, 1935.

Laboratory Examinations. 103 were made.

Sputum was examined 47 times. It was thin, contained elastic tissue and some pus. Staphylococci, streptococci, pneumococci, M. catarrhalis were ever present.

Urine was frequently examined. A trace of albumin was present in some of the specimens. Microscopically: hyaline, coarsely granular casts and a few pus cells were present.

No bile, no urobilinogen nor urobilin was found. Phenol-sulphon-phthalein test: 10 per cent first hour, 15 per cent second hour, 25 per cent total.

Feces: Several specimens were examined. No ova, intestinal parasites, ameba or tubercle could be found. One specimen showed pus and red blood cells. Culture of the stools for ameba was negative.

Blood: Culture was negative.

Agglutination tests for typhoid, Malta fever and tularemia were negative. Repeated examinations for malaria were negative. The Wassermann and Tchernogubov reactions were negative.

Blood Chemistry: N.P.N. 33 mg. per 100 c. c., urea nitrogen 16.5 mg. per 100 c. c., creatinine 0.8



mg. per 100 c. c., sugar 96 mg. per 100 c. c. Icterus index, 8. Diagnosis was difficult and puzzling.

Fragility of Erythrocytes: Range: beginning hemolysis 0.34 per cent NaCl, complete 0.20 per cent NaCl. Normal is 0.38 to 0.28. Therefore the erythrocytes are more resistant and their fragility is diminished.

Total white count varied between 6,000 and 15,500. The total red count between 2,400,000 and 4,150,000. The hemoglobin between 45 per cent and 55 per cent. The color index between 0.6 and 0.9. The differential count: small lymphocytes between 9 and 30, large mononuclears 0 and 2, neutrophils 68 and 91.

A Schilling count showed myelocytes 0, metamyelocytes 20, staff 40, segmented 30; marked shift to left. Reticulocyte count was 4 per cent.

Roentgen ray Examination. Increased density in the left apex and multiple areas of calcification in this region. Conclusion: Old T. B. left apex. (April 24, 1935).

Sacrum: Negative for bone or joint pathology (May 10, 1935).

No change from chest findings seen in previous examination. Marked scoliosis to the right in mid-dorsal region. (May 13, 1935).

G. I. barium enema: Markedly spastic colon. Gall bladder no evidence of biliary calculi. (August 5, 1935).

Clinical Course: The patient became progressively weaker and emaciated. He perspired freely; throughout his stay in the hospital (April to September), except for the last three days of his illness, which were afebrile, he ran an intermittent temperature which would reach 101° F to 102° F. The respirations remained around 20 and the pulse varied between 80 and 90. Towards the end of his illness he complained of distention and diarrhea and developed some edema of the external genitals. In spite of all the examinations and observations made, I believe that every one who saw this case had some honest doubt as to what was the real diagnosis until the final microscopic examination of the tissues obtained at autopsy was made.

There was no paucity of diagnoses entertained: among these were tuberculosis, Addison's disease, chronic malaria, melano-sarcomatosis, abscess of the liver, pyelo-nephritis, tuberculous enteritis and pituitary cachexia.

Of course, it is now realized that no one unless possessed of an uncanny diagnostic acumen could have made the diagnosis of carcinoma of the adrenal. Dr. Jamson is to be congratulated on the fact of having entertained Addison's disease as a probable diagnosis. A few remarks here on Addison's disease and tumors of the adrenals may not be out of place. In the words of Addison, the disease which he was the first to describe is characterized by "anemia, general languor, or disability, remark-

able feebleness of the heart's action, irritability of the stomach, and a peculiar change of color in the skin." The disease is rare. Osler saw 17 cases in 21 years in the U. S. During the past 16 years I have made more than 20,000 physical examinations and this is the only case that I have encountered. It is more common in men than women, thus of 183 cases collected by Greenhow, 119 were males, 64 females. It usually occurs between 20 and 40 years and may last a few weeks to ten years. Pathologically there may be found tuberculosis, simple atrophy, inflammation, or malignant disease of the adrenals or no lesions of the adrenals themselves but pressure or inflammation involving the semilunar ganglia. The fibrocaceous lesion due to tuberculosis is by far the most common condition found. Tumors of the adrenals may arise from the medulla or the cortex. They are rather rare. Of 40,412 hospital admissions Stout found 38 neoplasms: 17, primary, 21, secondary. Of these primary tumors, 15 were cortical adenomas, 1 associated with melanotic pigment. Gibson in 46,000 admissions found 4 adrenal tumors, 2 cortical, 2 medullary. At times small benign tumors are found at autopsy and which had caused no symptoms. Malignant tumors of the adrenals often arise from ectopic cell rests in the kidneys, liver, retroperitoneal tissues, ovary, uterus or testis. A case is reported of a malignant melanoma which probably originated in a pigmented mole and secondarily involved the adrenal. Briefly it may be said that cortical cell tumors are associated with virilism in the female and sexual precocity in the male in case of children, while in the adult symptoms of pseudo-hermaphroditism appear. If the medullary portion is stimulated there may be an elevation of blood pressure. Destruction of both cortex and medulla results in the Addisonian syndrome: the loss of the medulla causing low blood pressure and that of the cortex causing asthenia and low metabolic rate.

Treatment was purely symptomatic. Several transfusions were given. We did not use any preparation of the cortical hormone of the suprarenal gland. Organotherapy could have had no curative result as the case was a carcinoma.

It is interesting to note that Rowntree, Greene, Ball, Swingle, and Pfiffner of the Mayo Clinic in 1931 reporting on the results of 20 cases treated with the cortical hormone of the suprarenal gland as prepared by Swingle and Pfiffner in 1930 were so pleased with the results obtained that they state that in their opinion "a new and specific agent of value in organotherapy" has been found.

Some of the autopsy findings will now be briefly noted.

The skin is of a light bronze color. The muscles are atrophied all over the body. A very hard gland about the size of a pecan was found in the left

portion of the mesentery. About 400 to 500 c. c. of a thin straw colored transudate were present in each pleural cavity. The right lung is collapsed and the apex is adherent by many bands of old adhesions; near the apex are old healed tuberculous lesions and areas of congestion throughout. About 100 c. c. of thin, straw colored fluid were present in the pericardial cavity. The coronary vessels are tortuous and the arteries are hardened, the left is almost occluded by an elevated plaque. Small nodules are found on the leaflets of the tricuspid valve. The walls of the heart are very friable and of an olive brown color. A few irregular plaques, both white and calcified are present in the aorta. The liver and spleen are moderately enlarged. The gall bladder and bile duct systems are negative. The right kidney has its surface studded with four or five small discrete white nodules, which are rather firm in consistence. Several of these are also present in the adjacent connective tissue. The right adrenal gland is intact and upon gross inspection shows no gross abnormalities. The bladder, prostate, sigmoid and rectum are negative. The brain is not disturbed.

**Microscopic Findings.** Broncho-pneumonia, areas of bronchiectasis, atelectasis, marked fibrosis; chronic passive congestion and early central cirrhosis of the liver; adeno-carcinoma of right adrenal, metastases to kidney and perinephritic tissue; chronic interstitial nephritis. Marked fibrosis around seminiferous tubules; chronic fibrous prostatitis.

**Final Diagnosis.** Broncho-pneumonia; adeno-carcinoma of right adrenal with metastases to kidney and perinephritic tissue; generalized arterio-sclerosis of left coronary artery; chronic myocarditis and endocarditis; healed tuberculosis of left apex and collapse of left lung.

This paper was discussed by Drs. S. C. Jamison and M. Couret.

The program also included "Renal Tuberculosis" (case) by Dr. R. M. Willoughby. Discussed by Dr. H. W. E. Walther.

"Office Observations of Leukorrhea with Special Reference to the *Trichonoma Vaginalis*" by Dr. J. F. Isaacson. Discussed by Dr. L. A. LeDoux.

The meeting then resolved into Executive Session and was adjourned at 10:00 p. m.

#### HOUSTON HOSPITAL

At the regular monthly staff meeting of Houston Hospital three prominent Memphis physicians were guests on the program. Dr. Edward Clay Mitchell of the Department of Pediatrics of the University of Tennessee Medical School read a paper on "Some Infections of the Urinary Tract in Children," which was discussed by Drs. John J. Shay and George R. Livermore.

An oyster supper was served for thirty visiting physicians, and delightful music was furnished by the Music Department of Bennett Academy, Mathiston.

Douglas D. Baugh,  
Secretary.

#### VICKSBURG HOSPITAL AND CLINIC STAFF MEETING

The regular staff meeting of the Vicksburg Hospital and Clinic was held October 10. It was reported by the secretary that no cases of mortality had occurred during the preceding month. Reports covering the activities of the various departments were read and analyzed.

The following scientific program was then presented, after which lunch was served and the meeting was adjourned:

1. Some General Remarks Concerning Malignancy, With Case Report.—W. H. Parsons.
2. Review of the Recent Literature in Regard to Formation of Rental Stones.—T. P. Sparks, Jr.
3. Demonstration of X-Ray Films.—W. K. Purks.
4. Discussion of Recent Literature by the Staff. Abstract.—Lymphosarcoma of Tonsil.—Dr. W. H. Parsons.

The patient, a white female, 53 years of age, registered at the Vicksburg Clinic, September 4, 1934.

The family history was not remarkable, except that a number of relatives had died of hypertensive heart disease. The patient had suffered one miscarriage. There were five children living and well.

Her general health had been excellent. She had suffered the usual simple diseases of childhood and on several occasions since had had rather severe attacks of malaria. Ten years ago she was diagnosed elsewhere as having "acute colitis" and four years ago she developed hypertensive heart disease. There have been no other illnesses of magnitude, the patient had never been previously hospitalized.

In the fall of 1933, the patient being uncertain as to the exact month, without apparent cause there developed what she described as a "knot in the left side of the throat." At that time there was no pain and no treatment was used. The condition spontaneously seemed to grow better. About July 1, 1934, that is two months previous to registration, she once more became conscious of a feeling of swelling in the throat, which the patient attributed to her tonsils. Soreness then developed, but not of severe grade. There had been no particular pain although recently there was some discomfort. On September 3, 1934, that is the day before admission, considerable blood was expected from the mouth.

The gastro-intestinal history was essentially negative. The appetite is reasonably good. There

was no history of dyspepsia, the patient was able to eat whatever she desired without discomfort. There had been no significant change in bowel habits. Blood had never been passed per rectum nor had abdominal pain, jaundice, hematemesis or melena occurred. There was some shortness of breath, quite marked on exertion. There had been no unusual headache nor edema of the extremities. There had been mild precordial pain.

There had been occasional nocturia. The stream had always been free. Control had been perfect. The act of micturition at no time was accompanied by pain nor had blood or calculi been passed.

The climacteric was reached a number of years ago. At that time there were mild hot flashes with nervousness. All labors had been spontaneous and postpartum convalescence in each instance had been uneventful.

Physical examination showed a middle aged, under nourished white female. The skin and mucous membranes were definitely sallow in color. The pupils were contracted, but reacted normally both to light and accommodation and none of the stigmata of goitre were noted. The posterior cervical glands were not palpable. There were a few cervical glands felt along the anterior surface of each side of the neck. They were not unduly hard and the impression gained was that they were not metastatic. The thyroid was normal in position and to palpation and auscultation was normal. Oral hygiene was only fair. A large ulcerated growth invading the entire tonsil and the contiguous tissue was noted. Both pillars had been completely destroyed. The appearance was that usually noted in lymphosarcoma and it was felt that this condition was present and that the outlook was exceedingly poor. The head and neck otherwise were not remarkable.

Examination of the chest showed it to be essentially normal. There were no abnormal areas of dullness, the breath sounds were normal. The heart sounds were rather faint and it was felt by the consultant that considerable myocardial damage with probable coronary disease was present. The blood pressure was systolic 170, diastolic 100. The electrocardiogram revealed nothing of further significance. The abdomen revealed no masses, areas of tenderness or rigidity. The edge of the liver, the spleen and kidneys were not palpable.

General study otherwise was not remarkable.

Roentgen ray study of the chest and of the long bones showed no evidence of metastatic growth.

The patient was hospitalized, a fragment of tissue was removed for biopsy and the following report was obtained:

"Section shows a surface lining of stratified epithelium that is slightly hyperplastic. There is a rather dense round cell infiltration just below the mucous membrane. Practically all the speci-

men below the mucosa is composed of active-growing groups of cells with rather faint stroma in which there are only a few blood vessels. There are many mitotic figures and most of the cells have large vesicular nuclei of an irregular size. These cells seem to be of lymphoid tissue origin rather than from epithelial tissue and the arrangement is that of a sarcoma. Histologic diagnosis: Lymphosarcoma."

The patient was hospitalized and under local anesthesia, after preliminary vascular tests had been made, I ligatured the left common carotid artery. Radium was then applied to the growth by my associate, Dr. I. C. Knox.

The patient's postoperative convalescence was entirely uneventful. The sutures from the wound in the neck were removed in the usual time and the wound healed cleanly. The patient was allowed to leave the hospital on the fifth postoperative day.

This patient has reported to the Clinic at intervals since and there is now no evidence present of the original growth. She feels quite well, is able to take full diet, has gained considerable weight and considers herself well. How long this happy state of affairs will continue is, of course, a matter of uncertainty at this time.

#### VICKSBURG HOSPITAL AND CLINIC STAFF MEETING

November 14, 1935

1. Tetanus.—Dr. I. C. Knox.
2. Special Problems in Diagnosis and Treatment of Rheumatic Heart Disease.—Dr. W. K. Purks.
3. Discussion of Recent Literature.—Staff.
4. Demonstration of X-ray Films.—Dr. W. K. Purks.

Abstract.—Rheumatic Heart Disease, Mitral Stenosis, No Symptoms Until Onset of Auricular Fibrillation Forty-Three Years After the Initial Lesion.—Dr. W. K. Purks.

Mrs. J. W. B., a white female, aged 58 years, was admitted to the hospital, August 28, 1935, complaining of weakness and easy fatigability. Her family history was negative for vascular disease and remarkable for longevity.

Martial: She had been married forty years. Had eight children living and well. There had been one stillbirth. Husband is at present living and well.

Social habits and occupation essentially irrelevant as regards her present complaint.

Past History: She had the usual childhood diseases without complications. She had no significant sore throat in childhood. She did, however, have frequent nose bleeds. No history of growing pains or rheumatic manifestations. At age of 16 years she had a typical attack of chorea which necessitated several months of guarded con-



valescence. At the age of 28 years she had typhoid fever without complications. A further review of her past history with relation to the various systems discloses no significant abnormalities except as related below in present illness.

**Present Illness.**—Up until March 14, 1931, the patient considered herself perfectly well though she had at times noticed slight shortness of breath on exertion. On the above named date she developed a mild attack of what was diagnosed as influenza. She only had low grade fever and did not at first consider consulting a physician. However, after remaining in bed for one week she still felt fairly badly. One day upon attempting to walk across the floor she suddenly became aware of palpitation and marked shortness of breath. The episode made a very definite impression upon the patient and she immediately called her physician who advised her that she had heart disease and must remain in bed for some time. She then remained in bed for about two weeks and upon getting up again was troubled with shortness of breath and palpitation. From this date forward she has at intervals been required to remain in bed for periods of weeks or sometimes months because of palpitation and shortness of breath though for the most part she has recently been fairly well and leads a reasonably active life. A recent attack of coryza lowered her cardiac reserve and increased the amount of palpitation and was responsible for her present admission to the hospital.

Physical examination was of no importance except insofar as it concerned the cardiac condition. There was no engorgement of neck veins. There were no abnormal pulsations in the neck and no tracheal tug. The cardiac impulse was best seen and felt in the fifth interspace, ten centimeters to the left. It was of a full thrusting character and irregular in rhythm. Percussion showed the left border of dullness to correspond with the location of the apex by palpation. There was no enlargement made out to the right and no increase in retromammary dullness. There was no apical thrill. Auscultation showed the heart sounds to be grossly irregular. The first sound at the apex was markedly accentuated. It was followed by a systolic murmur, grade 3-plus. The second sound at the apex was soft and was followed by a definite mid-diastolic murmur. There was, however, no presystolic accentuation of this murmur. There was no diastolic murmur in the aortic area. Heart rate was 100 to the minute. Blood pressure was 120/75. The lungs were entirely negative.

**Laboratory Findings.**—The routine blood and urine studies disclosed Kahn negative, red blood count 4,820,000, hemoglobin 72 per cent (Tallqvist), white blood count 9,000, with a normal differential count. No malaria was found. Fasting blood

sugar was 143 mg. per cent. The urine showed a specific gravity of 1.014, was alkaline in reaction. There was the slightest trace of albumin and a few leukocytes in the sediment. Basal metabolic rate was plus 7.5 per cent.

A teleoroentgenogram of the heart showed it markedly dilated and hypertrophied, the major part of the enlargement involving the right ventricle. There was definite fullness in the region of the left auricle, producing a relatively straight left cardiac border. This heart silhouette was considered characteristic of mitral stenosis and subsequent fluoroscopy of the chest showed the left auricle to be markedly enlarged, almost completely filling the posterior mediastinum. At fluoroscopy no intra-cardiac calcification could be made out.

Electrocardiograms showed auricular fibrillation.

#### VICKSBURG SANITARIUM STAFF MEETING

A regular meeting of the staff of the Vicksburg Sanitarium was held November 13 with twelve members and three guests present. After a supper served at 6:30 P. M., the meeting was called to order by the president, Dr. R. A. Street, Jr. Reports were received from the records department and discussed.

Dr. F. Michael Smith, director, Warren County Health Department, presented a report of vital statistics for the month of October.

Special case reports were presented as follows:

1. Toxic Goitre of the Poor Risk Type.—Dr. A. Street.
2. Empyema of the Gallbladder.—Dr. J. A. K. Birchett, Jr.
3. Pernicious Anemia—Progress In Several Cases.—Dr. L. J. Clark.

Dr. L. S. Lippincott reported the recent meeting of the North Mississippi Medical Society at Oxford and Dr. R. A. Street, Jr., reported the recent meeting of the Interstate Postgraduate Medical Assembly at Detroit.

A number of selected radiographic studies of pulmonary tuberculosis were demonstrated.

The next meeting of the staff will be held December 11.

Leon S. Lippincott,  
Secretary.

**Abstract: Toxic Goitre of the Poor Risk Type.**—Dr. A. Street.

**Patient.**—White female, aged 55 years, married; has eight healthy children; no miscarriages; occupation housewife; admitted to Vicksburg Sanitarium July 2, 1935.

**Chief Complaint.**—Pain in precordial area, radiating down left arm, followed by drowsiness, inability to take food and virtually comatose condition. Acute for one week.



**Present Illness.**—Losing weight for one year (35 pounds). Appetite excessive until eight days ago when anorexia occurred. Some blurring of vision and spots before eyes. Some choking sensation. There has been cough and thick foul yellow serum, more in the morning. Bowels constipated. No nocturia. Has tolerated cold weather exceptionally well and hot weather poorly. A diagnosis of goitre had been made three weeks before admission at which time basal metabolic rate was said to have been over one hundred per cent. She had been given iodine. Blood pressure said to have been 190. History obtained from family.

**Previous History.**—No typhoid; no accidents; no operations; no rheumatism; no scarlet fever; no diphtheria.

**Family History.**—Father died at age 98 years, mother at age 85 years; one brother living and well; one sister living and well. No tuberculosis or cancer.

**Physical Examination.**—Well developed, adequately nourished.—Prostrated and semicomatose. Temperature 98.2°F.; respiration 20; pulse 122; blood pressure 110/50. Skin slightly cyanotic, moist and warm. Marked exophthalmos; pupils equal and react. Thyroid enlarged (+++), firm and nodular. Knee jerks present and equal. Lymph nodes not enlarged. Tongue dry and coated. Teeth in good condition. Pharynx not remarkable; tonsils small with no evidence of inflammation. Pulmonary resonance normal; normal voice and breath sounds; no rales. Heart moderately enlarged, perpetually irregular and rapid. Abdominal, pelvic and rectal examinations show nothing remarkable.

The impression was that the patient had a thyrotoxic background but that the immediate condition was cardiac with coronary artery disease and auricular fibrillation. Given 500 cc. of 10 per cent glucose solution intravenously, digitalis intramuscularly, and morphine as necessary. There was marked improvement and iodine therapy was continued.

**Clinical Laboratory.**—Blood count not remarkable. Urine, July 2, showed 0.63 per cent sugar; subsequently nothing remarkable except very slight trace of albumin and rare finely granular casts. July 3, urea nitrogen was 21.5 mg. per 100 cc. and sugar 170 mg. Sputum was purulent; no tubercle bacilli found. Basal metabolism July 5, was plus 83 per cent. Blood Wassermann (three antigens), Kline and Young, Kahn and Eagle flocculation tests were all negative.

**Electrocardiographic Study,** July 5, by Dr. L. J. Clark, showed definite evidence of coronary artery disease.

After the third day of rest and treatment the picture changed from that of cardiac decompensation to one predominantly thyrotoxicosis.

The precordial pain subsided. The pulse was rapid but regular. Stupor was replaced by mental alertness. There was marked restlessness and marked tense tremor. The blood pressure increased from systolic 100 and diastolic 50 to systolic 190 and diastolic 70. Exophthalmos was more marked. In view of the fact that the patient had been taking iodine for three weeks already it was not felt that she would very likely arrive at an operable condition on that therapy alone. She was placed on a high carbohydrate, high fat, and low protein diet and was given insulin properly checked by Dr. L. S. Lippincott. Roentgen ray therapy, 125 KPY, Filter VI A1, was given to thyroid region beginning on July 5 and continuing daily, 300 R each day, until a total dose of 1000 R was given. Discharged from hospital July 14 to continue same regime and to report back in two weeks. General condition was much improved but metabolic rate was unchanged.

Readmitted July 28. Has felt well since discharge from hospital. No precordial pain. Has continued diet. Blood pressure 160/70; pulse 110 and regular. Taking 1-½ grains of digitalis each night. Exophthalmos and tremor are marked. Skin is moist. Hands are warm. Marked bruit in region of upper pole of each lobe of thyroid.

**Clinical Laboratory.**—Urine shows sugar 0.45 per cent. Hemoglobin 82 per cent; erythrocytes 3,700,000; leukocytes 12,600; normal differential count. Blood urea nitrogen 4.28 mg. per 100 cc.; blood sugar 91 mg. Basal metabolic rate, July 29, plus 44 per cent. Total blood plasma proteins 10.29 per cent.

Patient discharged on August 4 on same medication and diet including iodine therapy, and in addition, liver extract and iodine by mouth, to return September 1.

Readmitted September 1. Has done well until last three days when she became tired of her diet and developed slight nausea and anorexia. Physical examination showed pulse 122; temperature 98.6°F.; respiration 20. Same definite findings of hyperthyroidism as noted before. Blood pressure 170/100.

**Clinical Laboratory.**—Urine showed slight trace of albumin; no sugar. Hemoglobin 87 per cent; leukocyte count normal; total plasma proteins 7.67 per cent basal metabolic rate, September 2, plus 61 per cent; September 5, plus 49 per cent.

Ligation of right superior thyroid artery was performed September 7. This procedure was well tolerated.

Basal metabolic rate, September 13, plus 50 per cent.

Ligation of left superior thyroid artery was performed on September 14. This was well tolerated.

Basal metabolic rate, September 18, plus 47 per cent; September 28, plus 30 per cent.

Discharged September 29. Diet during this stay had been unrestricted but with additional carbohydrate feeding and with insulin administration. Pulse on discharge 88 and regular. General condition improved but still strikingly hyperthyroid in appearance. Instructed to return October 15 and to continue to take iodine and high caloric diet.

Readmitted October 15. Temperature 98° F.; pulse 86; respiration 18; pulse regular. General appearance improved but still typically hyperthyroid. Blood pressure 165/70; basal metabolic rate October 16, plus 36 per cent; October 19, plus 31 per cent.

Subtotal thyroidectomy was done October 22 under local anesthesia. Owing to large size density of the gland operation was definitely more difficult than usual but patient did not complain and it was not necessary to supplement the local anaesthesia with gas. Operation was well tolerated. Highest temperature after operation 101°F.

Discharged November 6. Wound healed by primary union except for site of small drain. At time of discharge clinical picture was very definitely changed. The only residual evidence of hyperthyroidism was the exophthalmos. Calm, composed, and of impressively normal appearance. Weak but gaining strength rapidly and able to walk about hospital.

**Tissue Pathology.**—Microscopic examination showed hypertrophy and hyperplasia of exophthalmic type, with little colloid and some lymphoid hyperplasia. Scattered through both lobes were several small to medium sized nodules of adenoma.

**Remarks.**—I am glad to present the record of this case because it seems to be one of a definite and important type. Treatment was begun on July 2. The patient at that time showed evidence which was considered to indicate positively unjustifiable operative risk regardless of iodine therapy. Iodine therapy, roentgen therapy and ligations were used along with rest and forced feeding. Operation was not done until there was evidence that the operative hazard was low and this required a period of treatment and careful observation from July 2 to October 22, almost four months. Another type of case is one in which iodine can be given for ten days and the patient will then be found in good condition for subtotal thyroidectomy. I want to emphasize that all cases do not fall into that class.

#### VICKSBURG SANITARIUM STAFF MEETING

**Abstract.**—Empyema of the Gallbladder.—Dr. J. A. K. Birchett, Jr.

**Patient.**—Negro female, aged 65 years, admitted to Vicksburg Sanitarium October 14.

**Present Illness.**—Severe pain in abdomen which began one week ago, associated with nausea and vomiting. Twelve hours after onset a mass appeared in the right lower quadrant of abdomen, very tender on palpation. That night began to have rigors which have been continuous since. Fever has been as high 103°F. There has been no diarrhea; bowels have moved normally. Her home doctor made a diagnosis of acute appendicitis with abscess and advised hospitalization for surgical treatment.

**Past History.**—Indigestion for past ten years. Feels as if there was a lump in the throat following ingestion of food and at times spits up food; has suffered with severe constipation. Had "flu" and pneumonia in 1918. Has had twelve normal deliveries.

**Family History.**—No tuberculosis or cancer.

**Physical Examination.**—Undernourished, fairly well developed, complaining of severe pain in abdomen. Temp. 100°F.; pulse 110; blood pressure 140/80. Sclerae jaundiced. Pelvic examination shows atrophic structures commensurate with the age of patient. Urine very dark; catheterized specimen apparently contains bile. Right side of abdomen rigid with mass size of a large orange in appendiceal region, i. e., to right of umbilicus and mesial to iliac crest, and acutely tender on pressure.

**Clinical Laboratory.**—Hemoglobin 87 per cent; erythrocytes, 4,150,000; color index 1; reticulocytes 0.2 per cent; leukocytes 9,900; differential leukocyte count, small lymphocytes 18 per cent, large lymphocytes 7 per cent, monocytes 2 per cent, polymorph. neutrophils, mature 51 per cent, band forms 21 per cent, eosinophils 1 per cent; no malarial found. Blood Wassermann, Kline and Young, Kahn and Eagle flocculation tests, negative. Icterus Index 35. Urine: Cloudy, acid, large trace of albumin, sugar 1 per cent, large trace of bile, numerous leukocytes, some fresh red blood cells.

**Procedure.**—With the history of acute gastro intestinal symptoms for several years, the advent of an acute abdominal crisis with evidence of sepsis and jaundice made us feel that we were dealing with an obstructive lesion of the gallbladder. The patient though considerably shocked and somewhat septic, we advised immediate surgical interference, possibly drainage of empyema of the gallbladder. Glucose was given intravenously as supportive measure with calcium, grains 10, to assist in promoting coagulation. Under local anaesthesia, a right rectus incision was made over the mass, which proved to be an immense gallbladder, being at least ten inches from the fundus to the region of cystic duct. There was beginning gangrene in the fundus. The condition of the patient and her

age and the presence of adhesions about the ducts which would require tedious dissection and increase the risk of hemorrhage if cholecystectomy was performed influenced us against this procedure. Therefore, the gallbladder was aspirated and the bile and purulent material evacuated and many sand-like stones were removed from the cystic duct and gallbladder. There were 361 stones from size of millet seed to pea and large amount of putty like material which was removed with curet scoop. This material was firmly packed in cystic duct and was causing direct obstruction of duct and the mass formed by it was the cause of the obstruction of common duct by pressure. A resection of the gangrenous portion of the fundus of gallbladder which was approximately the distal third was done. A No. 22 catheter was placed in the opening and the wall of gallbladder was closed about it

ly two layers of continuous catgut sutures and fixed to the parietal peritoneum. No other anaesthesia was used, but the local, which was preceded by a two-hundredth of hyoscine and one-eighth of morphine, which proved sufficient.

Follow-Up.—The patient was given daily calcium, grains 10. In twenty-four hours there was normal bile drainage from the cholecystotomy tube. There was a gradual drop of temperature which was normal at the end of the fourth day. The jaundice began to clear from the sclera and the urine began to be jaundice free; able to take soft diet on the sixth day and the cholecystotomy tube was removed on the twelfth day. Patient was discharged on the thirteenth postoperative day. General condition good and has returned to the outpatient department and dressed on several occasions, and the condition is excellent.

## TRANSACTIONS OF ORLEANS PARISH MEDICAL SOCIETY

DECEMBER 2 Eye, Ear, Nose and Throat Hospital Staff, 8 P. M.

DECEMBER 4 Clinico-Pathological Conference, Touro Infirmary, 11:15 A. M. to 12:15 P. M.

DECEMBER 4 Mercy Hospital Staff, 8 P. M.

DECEMBER 6 Pathological Conference, Hotel Dieu, 11 A. M. to 12 Noon.

DECEMBER 9 ORLEANS PARISH MEDICAL SOCIETY, 8 P. M. Stanford E. Chaille Memorial Oration and Memorial Meeting.

DECEMBER 11 Touro Infirmary Staff, 8 P. M.

DECEMBER 13 Pathological Conference, Hotel Dieu, 11 A. M. to 12 Noon.

DECEMBER 13 French Hospital Staff, 8 P. M.

DECEMBER 14 Election of Officers for 1936. Orleans Parish Medical Society. Balloting shall take place between 10:00 A. M. and 12:00 Noon; 2:00 and 5:00 P. M. and 7:00 and 8:30 P. M.

DECEMBER 16 Hotel Dieu Staff, 8 P. M.

DECEMBER 17 Charity Hospital Medical Staff, 8 P. M.

DECEMBER 18 Clinico-Pathological Conference, Touro Infirmary, 11:15 A. M. to 12:15 P. M.

DECEMBER 18 Charity Hospital Surgical Staff,

DECEMBER 19 Eye, Ear, Nose and Throat Club, 8 P. M.

DECEMBER 20 Pathological Conference, Hotel Dieu, 11 A. M. to 12 Noon.

DECEMBER 20 I. C. R. R. Hospital Staff, 12 Noon.

During the month of November, besides the regular meeting of the Board of Directors, the

Society held two regular scientific meetings. The following programs were presented:

November 11, 1935

Erythroblastic Anemia. (Case Presentation.)

By.....Drs. G. Richarda Williamson and Robert A. Strong.

Pilonidal Sinus.

By.....Dr. I. M. Gage.

A Review of Page's Epidural Anesthesia with a Report of 100 Cases.

By.....Dr. Chas. B. Odom.

Discussed by Drs. P. Graffagnino, I. M. Gage and H. Vernon Sims.

November 25, 1935

### SYMPOSIUM ON CANCER

The Operation of the Oscar Allen Tumor Clinic with Case Reports. Illustrated by Lantern Slides and Life Paintings.

By.....Dr. James T. Nix.

Newer Methods in Diagnosis of Early Carcinoma of the Cervix.

By.....Dr. Curtis H. Tyrone.

Signs and Symptoms of Brain Tumors.

By.....Dr. Gilbert C. Anderson.

Delegates to the Louisiana State Medical Society were elected for a term of two years at this meeting as follows:

DELEGATES—Dr. Frederick L. Fenno, President, Dr. Val H. Fuchs, Dr. Shirley C. Lyons, Dr. M. T. Van Studdiford, Dr. Foster M. Johns, Dr.



Emmett I. Irwin, Dr. Edward L. King, Dr. John H. Musser, Dr. E. L. Leckert.

ALTERNATES—Dr. J. Raymond Hume, Dr. Walter P. Gardiner, Dr. L. C. Chamberlain, Dr. James T. Nix, Dr. A. E. Fossier, Dr. M. O. Miller, Dr. H. B. Alsobrook, Dr. R. M. Willoughby, Dr. C. J. Miangolarra.

Nominations for Officers for 1936 were handed in to the Secretary in accordance with the By-Laws as follows:

President, Dr. Frederick L. Fenno. Endorsed by Drs. L. C. Chamberlain, John J. Irwin, Urban Maes, Waldemar R. Metz and P. A. McIlhenny.

First Vice-President, Dr. Foster M. Johns. Endorsed by Drs. Emmett L. Irwin, Paul A. McIlhenny and P. T. Talbot.

Second Vice-President, Dr. Edwin L. Zander. Endorsed by Drs. H. Butker, Ernest Celli and W. P. Gardiner.

Third Vice-President, Dr. J. Raymond Hume. Endorsed by Drs. A. V. Friedrichs, Shirley C. Lyons and Jos. P. Palermo.

Secretary, Dr. Gilbert C. Anderson. Endorsed by Drs. Sidney M. Copland, J. D. Rives and Eugene B. Vickery.

Treasurer, Dr. Shirley C. Lyons. Endorsed by Drs. B. J. DeLaurel and Alton Ochsner.

Librarian, Dr. Alton Ochsner. Endorsed by Drs. Paul B. Cameron, Philip H. Jones and E. L. King.

#### ADDITIONAL MEMBERS OF BOARD OF DIRECTORS

Dr. Val H. Fuchs. Endorsed by Drs. Frederick L. Fenno and F. M. Johns.

Dr. Edwin H. Lawson. Endorsed by Drs. W. R. Brewster, David Hyman and H. W. Kostmayer.

Dr. C. L. Peacock. Endorsed by Drs. Manuel Gardberg, Shirley C. Lyons and R. M. Willoughby.

Election of these Officers will take place Saturday, December 14, 1935. Balloting shall take place between 10:00 A. M. and 12:00 Noon; 2:00 and 5:00 P. M. and 7:00 and 8:30 P. M. ONLY MEMBERS IN GOOD STANDING ARE ELIGIBLE TO VOTE.

Notice has been received that a physician is

wanted in Zachary, Louisiana. For further details call at the office of the Society.

The following doctors from New Orleans attended the recent meeting of the Southern Medical Association in St. Louis: Drs. C. C. Bass, Elizabeth Bass, D. C. Browne, W. R. Buffington, Chas. F. Craig, Carl Dauer, R. D'Aunoy, Roy E. de la Houssaye, T. J. Dimitry, Chas. W. Duval, Ernest Carroll Faust, A. Scott Hamilton, Wm. H. Harris, G. J. Hauer, E. H. Hinman, John R. Hume, Foster M. Johns, John A. Lanford, E. H. Lawson, Waldemar R. Metz, Alton Ochsner, Neal Owens, Walter J. Otis, Wm. A. Reed, Jos. W. Reddoch, J. N. Rous- sel, John T. Sanders, Robert A. Strong, M. T. Van Studdiford, J. Ross Veal, E. von Haam and Wm. A. Wagner.

#### TREASURER'S REPORT

Actual book balance 9/30/35.....	\$ 102.39
October credits .....	\$ 936.14
Total credits .....	\$1,038.53
October expenditures .....	\$ 342.04
Actual book balance 10/30/35.....	\$ 696.49

#### LIBRARIAN'S REPORT

On request of physicians, members of the staff have collected material on the following subjects during October:

Tuberculosis in childhood  
Pain in angina pectoris  
Dactylography  
Pulsating exophthalmus  
Achondroplasia  
Meitomial conjunctivitis  
Toxic goiter in children  
Backache  
Torsion of normal adnexa  
History of radium  
Indications for splenectomy  
Pneumothorax in tuberculosis  
Relation of urinary tract to gastro-intestinal tract in disease  
Treatment of thrombocytopenic purpura  
Otomycosis  
Pansinusitis  
Personal bibliography of W. A. Reed  
Old rupture of duodenal ulcer  
Physiotherapy, hyperpyrexia and diathermy in early and generalized syphilis



Oroya fever

Embryonic organizers

Content of ascaric acid in tissues.

During October, 795 books were circulated to doctors, or about  $1\frac{1}{2}$  to each member of the Society. In addition, 971 volumes were circulated to students, making a total of 1766. These figures do not include the great use of books and journals within the reading rooms.

One hundred and eleven books have been added to the Library during the month. Of these, 15 were received by binding, 2 by purchase, 75 by gift and 19 from the New Orleans Medical and Surgical Journal. New titles of recent date are listed below:

#### NEW BOOKS—OCTOBER

Hertzler, A. E.—Diseases of the Thyroid Gland. 1935.

Osgood, E. E.—Textbook of Laboratory Diagnosis. 1935.

International Medical Annual. 1935.

A. M. A.—Section on Nervous and Mental Diseases—Transactions. 1934.

United Fruit Co.—Medical Department—Report. 1931.

Oxford Medicine. v. 2 pt. 3 1935

White, J. C.—Autonomic Nervous System. 1935.

Dunbar, H. F.—Emotions and Bodily Changes. 1935.

Christie, A. C.—Economic Problems in Medicine. 1935.

Karsner, H. T.—Human Pathology. 1935.

Godin, Paul—Recherches Anthropométriques sur la croissance. 1935.

Beer, Edwin—Tumors of the Urinary Bladder. 1935.

Smillie, W. G.—Public Health Administration in the U. S. 1935.

Prinz, Hermann—Diseases of the Mouth and their Treatment. 1935.

Strecker, E. A.—Practical Clinical Psychiatry for Student and Practitioner. 1935.

Gradwohl, R. B. H.—Clinical Laboratory Methods of Diagnosis. 1935.

Anderson, G. E.—Diet Control. 1935.

Johnston, T. B.—Synopsis of Regional Anatomy. 1935.

Riesman, David—Story of Medicine in the Middle Ages. 1935.

Levin, Louis—Living along with Heart Disease. 1935.

Joslin, E. P.—Treatment of Diabetes Mellitus. 1935.

Speed, Kelly—Fractures and Dislocations. 1935.

Bernard, Claude—Introduction to Study of Experimental Medicine. 1927.

Noguchi, Hideyo—Experimental Studies in Yellow Fever in Northern Brazil. 1924.

H. B. Alsbrook, M. D.,  
Secretary.

## LOUISIANA STATE MEDICAL SOCIETY NEWS

### THE STATE MEETING

In reference to the approaching meeting of the Louisiana State Medical Society to be held in Lake Charles on April 27, 28 and 29, 1936, it is very gratifying to report that the Calcasieu Parish Medical Society has selected Dr. Robert P. Howell as Chairman of the Committee on Arrangements. The following physicians of Lake Charles have been selected as Chairmen of the sub-committees in the preparation of arrangements for the meeting:

Commercial Exhibits: Dr. Olin Moss.

Entertainment: Dr. T. H. Watkins.

Finance: Dr. L. A. Hebert.

Golf: Dr. G. C. McKinney.

Hotels: Dr. J. A. Crawford.

Lanterns & Sound Amplifiers: Dr. L. Z. Kushner.

Publicity: Dr. W. P. Bordelon.

Registration & Badges: Dr. C. V. Hatchette.

Signs & Decorations: Dr. H. B. White.

Transportation: Dr. D. C. Iles.

Meeting Places: Dr. R. G. Holcombe.

Convention Clinics: Dr. Ben. Goldsmith.

Scientific Exhibits: Dr. J. G. Martin.

Dr. Howell, as General Chairman, has been very active in developing plans and the Secretary-Treasurer's office has had the opportunity of several

contacts with him and his committee in an endeavor to perfect such arrangements. It is very reasonable to presume that, with such manifested interest and energy as is being displayed by the physicians of Lake Charles, we can be assured of a most interesting and entertaining Annual Meeting in 1936.

All interested parties should communicate immediately with the Chairmen of the respective committees, who I am sure will be very glad to furnish full and detailed information concerning the plans for the meeting. Further announcements will be made from time to time in the Journal.

### CANCER CONTROL

The American Society for the Control of Cancer announces that the following educational material on cancer is available in Louisiana:

Slides—Tumors of the Breast (Medical). Dr. S. C. Barrow, Dr. P. T. Talbot, Dr. J. R. D'Aunoy.

Tumors of the Uterus (medical). Dr. S. C. Barrow, Dr. P. T. Talbot, Dr. J. R. D'Aunoy, Dr. T. B. Sellers.

Film Strips—Carcinoma of the Breast (medical). Dr. J. A. Lanford, Dr. S. C. Barrow, Dr. P. T. Talbot, Dr. J. R. D'Aunoy, Dr. T. B. Sellers.

Tumors of the Uterus (medical). Dr. J. A. Lanford, Dr. T. B. Sellers.

Fight Cancer With Knowledge (For women's clubs, luncheon clubs and other lay audiences). Dr. J. A. Lanford, Dr. S. C. Barrow, Dr. P. T. Talbot, Dr. J. R. D'Aunoy.

Cancer: Its Life History and Practical Measures for Its Control (For university students, nurses, etc.). Dr. J. A. Lanford, Dr. S. C. Barrow, Dr. P. T. Talbot, Dr. J. R. D'Aunoy.

Film Strip Projectors. Dr. J. A. Lanford, Dr. S. C. Barrow

Film and Projector (movie). 8 minute Canti film (for medical profession, medical students, nurses, etc.). Dr. S. C. Barrow, Dr. P. T. Talbot, Dr. J. R. D'Aunoy.

#### Addresses

##### *State Medical Society—Cancer Committee*

Dr. J. A. Lanford, 3500 Prytania Street, New Orleans, Chairman.

Dr. S. C. Barrow, 624 Travis Street, Shreveport.

Dr. J. T. Cappel, 422 6th Street, Alexandria.

Dr. Alton Ochsner, 1430 Tulane Avenue, New Orleans.

Dr. Walter Moss, 816 Ryan Street, Lake Charles.

Dr. Charles Norton, Franklin.

Dr. J. T. Nix, 1407 Carrollton Avenue, New Orleans.

Dr. Lester J. Williams, 251 Third Street, Baton Rouge.

Dr. J. G. Snelling, 128 De Siard Street, Monroe.

Dr. P. T. Talbot, 1430 Tulane Avenue, New Orleans.

Dr. J. R. D'Aunoy, State Medical School, New Orleans.

Dr. T. B. Sellers, 4414 Magnolia Street, New Orleans.

#### AMERICAN MEDICAL ASSOCIATION RADIO HEALTH PROGRAM

The programs being presented by the American Medical Association every Tuesday at 4 P. M. are being sent out over the N. B. C. Blue Network and through WSMB, New Orleans. They have proven to be extremely popular and therefore will continue under the title of "Dramatized Health Program", for the month of December. Dr. Morris Fishbein will talk on December 3 on "Tuberculosis" and on the 10th on "Hunting Accidents". On December 17, 24 and 31 Dr. W. W. Bauer will present as his topics, "Animal Diseases in Man", "Eat, Drink and Be Merry", and "Pneumonia".

These programs are well worth while and it would be an excellent idea indeed for physicians to call their patients attention to the dates of the weekly air presentations and tell them of its value. They have been quite enthusiastically received judging from the large mail response that has come to the office of the American Medical Association.

#### SCIENTIFIC EXHIBITS AMERICAN MEDICAL ASSOCIATION

Scientific exhibits to the Kansas City Session of the American Medical Association will be held in the Municipal Auditorium May 11-15 1936. Application for space should be made by filling out regular application blank. Assignment for space will be closed on January 27, 1936.

#### SOCIETY MEETINGS

The Southeastern Branch Society of the American Urological Association will hold its second annual meeting in Nashville, Tenn., December 6-7, at the Noel Hotel. The officers of this organization are:

Dr. Edgar G. Ballenger, President.

Dr. Henry W. E. Walther, President-Elect.

Dr. Earl Floyd, Secretary-Treasurer.

A most interesting program has been provided including such distinguished men as Dr. Wm. Braasch, Dr. Hugh Cabot, Dr. G. G. Smith, and others from all over the United States. In addition to the scientific program an interesting social program has been arranged. No registration fee will be required to attend the meeting.

The second annual meeting of the Mississippi Valley Medical Society will be held at the Hotel Burlington, Burlington, Iowa, September 30, October 1-2, 1936.

#### NEWS ITEMS

Dr. E. S. Hatch of the Tulane Graduate School of Medicine attended the meeting of the Clinical Orthopedic Society, November 15 at Louisville.

Dr. Leon J. Menville spoke Saturday, November 16, to the members of the Mobile County Medical Society on Some Aspects of Radiology. Dr. Menville will attend the meeting of the American Board of Radiology in Detroit, November 29-30, and will then follow it by going to the meeting of the Radiologic Society of North America in the same city.

Dr. P. T. Talbot and Dr. John H. Musser represented, respectively, the Louisiana State Medical Society and the New Orleans Medical and Surgical Journal at the Annual Conference of State Medical Secretaries and Editors, held under the auspices of the American Medical Association November 15 and 16, in Chicago.

Vitamin D milk has been employed from time to time by pediatricians throughout the country. This has been found to be of very excellent method of giving vitamin D to the growing infant. It would be of interest to the pediatricians of the city to know that this milk is now obtainable at the Cloverland Dairy. The vitamin D content is

400 U.S.P. units of vitamin D per quart, extracted from cod liver oil.

Five more States have been officially designated as modified accredited areas by the U. S. Department of Agriculture, signifying their practical freedom from bovine tuberculosis. These States, Massachusetts, South Carolina, Georgia, Alabama, and Louisiana, constitute the largest group ever admitted, at one time, to the modified accredited status in the history of eradication work.

RESOLUTIONS OF THE DEATH OF  
DR. ERNEST SYDNEY LEWIS, B.S., M.D.,  
F.A.C.S., LL.D.

The following resolutions were adopted by the faculty of the School of Medicine of Tulane University of Louisiana to commemorate the memory of Dr. E. S. Lewis, who was Professor of Obstetrics and Gynecology, Emeritus in the institution.

On August 12, 1935, Dr. Ernest S. Lewis died at the age of ninety-five years, in New Orleans, the city of his birth, where he had been an honored and distinguished member of the medical profession for seventy-three years. His death marked the passing of the oldest graduate of Tulane University, one of the builders and guides of its destinies during the early formative days of its existence, and active member of the Faculty of Medicine for forty-five years, and Professor Emeritus of Obstetrics and Gynecology for the past twenty-three years.

Left an orphan at the age of twelve, Dr. Lewis was taken into the home of two maiden aunts, sisters of his father, and the expense of his education through medical school was borne by an uncle, Dr. J. H. Lewis, whom he loved as a father. In 1859, he matriculated at the University of Louisiana, and in 1860, entered Charity Hospital as an intern.

At the outbreak of the Civil war, a true son of the South, he was anxious to join the military forces of the Confederacy, and even attempted to do so, but was persuaded he would be more useful in a medical capacity and returned to the University. In 1862, he passed a special examination granted him because of his brilliant record by the Board of Administrators, after only three years of study, and was appointed Acting House Surgeon of Charity Hospital, thus beginning his long years of service for that institution before he had reached the age of twenty-two.

When New Orleans surrendered to the Federal forces, Dr. Lewis, imbued with the feeling of that day, refused to receive the Federal sick and wounded at the Hospital. When General Ben Butler learned some Confederate troops had been transferred there he arrested the Board of Administrators, demanding an explanation from Dr. Lewis

for showing discrimination. Dr. Lewis agreed to admit the Federal soldiers with the proviso Butler would pay the salaries of additional physicians to take care of them. However, when Gen. Butler issued his famous edict compelling everyone to take the oath of allegiance or register as enemies of the U. S. Government, the entire hospital staff chose the latter course with the exception of one intern. In 1863, a "carpetbag" Board of Administrators was appointed at Charity Hospital, and Dr. Lewis, as always living unreservedly up to his convictions, declined an Assistant House Surgeonship with an increase of salary, and sought a pass to leave the city, but was refused. Since he could not serve Charity Hospital nor accept the coveted House Surgeonship, he stole out of the city to join the Southern cause, journeying with two companions for three days through the swamps in a skiff, from Bayou St. John to a point on the Lake midway between West End and Spanish Fort, where they rigged a sail and crossed the Lake to Madisonville. There Dr. Lewis boarded a train and joined Gen. Bragg's army, received his commission as Surgeon, was rapidly promoted for his valor and efficiency to a brigade surgeonship and later to a medical directorship in Wheeler's famous cavalry corps which was a participant in all the battles of the Army of Tennessee, and to which he was attached until the end of the war.

He returned to New Orleans penniless and resumed his work for Tulane University and Charity Hospital, assisting Dr. Chaille in the dissecting room as a volunteer and doing some prosecuting for Dr. Richardson. During the session of 1866 and 1867, Dr. Lewis was Chief of Clinic and assistant to Dr. Hunt in preparing material for his pathological lectures, and when Dr. Hunt was stricken with apoplexy about the middle of the course, Dr. Lewis filled his hours in physiology. With the close of the session, Dr. Lewis' connection with the hospital and college ceased for awhile. He was Health Officer of the State Board of Health in the Third District in 1867, and in his "Reminiscences" gives a graphic story of the fight waged against Asiatic Cholera and yellow fever with the ineffective and primitive measures of those days.

With the beginning of the college year in 1874, he was appointed Professor of *Materia Medica*, Therapeutics and Clinical Medicine and from that time to the day of his death his connection with the University was unbroken. In 1876, he became Professor of Obstetrics, Gynecology and the Diseases of Children. Gynecology, especially in its surgical aspects, was just beginning to be investigated, and little had been done in the war impoverished South. Dr. Lewis resolved to make this branch an important part of the medical course, opened clinics for the benefit of the students (and for his own benefit too, he explains, as his knowledge was little more than theoretical), made fundamental



changes in the management of cases through application of the principles of Lister and Pasteur, which brought about an enormous reduction in the deaths from sepsis, and in a surgical way did some excellent pioneer work in gynecology, which won for him a reputation throughout the United States and especially in the South, where he was regarded as the center of knowledge on that particular branch, although he persistently hid his light under a bushel and did not attend clinical meetings nor observe the operations of other men prominent in gynecology except when there happened to be a meeting in New Orleans.

But honors and distinctions sought him out. He was one of the founders of the Orleans Parish Medical Society and its Vice-President in 1878; a founder of the International Association of Obstetrics and Gynecology; Vice-President of the Southern Surgical and Gynecological Association in 1895, President in 1896, and later an Honorary Fellow; Chairman of the Section on Obstetrics and Gynecology of the American Medical Association; and a member of the Louisiana State Medical Society and of the Southern Medical Association. In October 1916, the American College of Surgeons conferred upon him its highest distinction, Honorary Fellowship, in recognition not only of his life of public service, but of his skill and learning as a surgeon and his devotion to the highest traditions of medical conduct.

Dr. Lewis was loved and esteemed by his colleagues, who on several occasions during his life publicly acclaimed the honor and praise due him for his long and brilliant service as teacher and surgeon. On May 23, 1912, at a meeting of the Faculty of the Medical School, before whom lay Dr. Lewis' plea to be relieved of his duties, Dr. Rudolph Matas, who had been a student and intern under Dr. Lewis, delivered an address in commemoration of the fiftieth anniversary of Professor Lewis' graduation in medicine and of the thirty-ninth consecutive year of his service as a teacher in the Medical Department of Tulane University. Resolutions were read regretting his resignation and recommending to the Board he be made Professor Emeritus of Obstetrics and Gynecology, and he was presented with a gold watch as a token of the appreciation and regret of his colleagues. In deference to the "insurmountable modesty" of Dr. Lewis these proceedings were not made public until the celebration of "Lewis Jubilee Night" by the Orleans Parish Medical Society on April 24, 1922 when Dr. Lewis gave his "Reminiscences" and was presented with a loving cup in commemoration of the completion of his sixtieth year in the active practice of his profession and as a token of "love and esteem for the Man, Soldier, Teacher and Physician." On June 7, 1922, Tulane University of Louisiana conferred

upon him the highest honor at its disposal, the degree of LL. D. in Medicine.

Dr. Lewis' record of service at Charity Hospital was parallel and equal to that for Tulane University. Although his private practice was large and for many years kept him busy almost twenty-four hours of the day, he visited the wards of Charity Hospital and operated there from the inception of his medical career in 1862, until 1912 when he resigned his work in the wards and was placed on the Consultant Staff. It is interesting to note in this connection that his last operation was performed at the age of eighty-seven years. In addition to his work as teacher and surgeon, in 1894, he was appointed Vice-President of the Board of Administrators, which position he held through the terms of office of Governors Foster, Heard, Blanchard and Sanders. During his Chairmanship, the Miles Amphitheatre, the Milliken and Delgado Memorials, and the Nurses Home were erected.

Dr. Lewis was a man of wide learning and culture, whose natural philosophic bent of mind was deepened by the study of Grecian philosophy which taught him to meet trials with stoical fortitude and gave him a very fine outlook on life. He was a man of great humaneness and sympathy for the unfortunate. His profession was more to him than the monetary recompense he acquired from it, and often he even forgot to send a bill. He found it a pleasure to help young men, and many a physician who has risen to prominence owes his success to his assistance and opportunities Dr. Lewis placed in his path.

His life and his work were so inextricably woven, warp and woof, with the history and growth of the institutions he served, with the history and advancement of the medical profession of this section, that the threads of his life will be sorely missed in the pattern, and in order that there may be some slight memento of his achievements and of his place in our hearts, the following resolutions are offered:

Whereas, On August 12, 1935, Death claimed Dr. Ernest Sydney Lewis, who had served his city, state and the South, as soldier, surgeon and teacher, and who was loved, respected and venerated by his pupils, his associates and the community for his integrity, charity, wisdom and skill and

Whereas, Dr. Lewis was a member of the Medical Faculty of Tulane University of Louisiana from the beginning of his medical career to the time of his death, for thirty-six years as Professor of Obstetrics, Gynecology and the Diseases of Children, and for twenty-three years Professor Emeritus of that same Chair, and

Whereas, Dr. Lewis was a pioneer in the development of gynecologic and abdominal surgery in this section of the country and by his teachings



and accomplishments aided in establishing the prestige of the University as a medical center.

Therefore, be it Resolved, That by his death the Medical Faculty of the Tulane University of Louisiana has lost one of its most distinguished members, and the University a graduate whose achievements redounded to the glory of his Alma Mater.

Be it further resolved, That as a lasting tribute and in testimony of the love and honor in which his memory is held, these resolutions be spread on the minutes, and a copy be sent to the family.

### INFECTIOUS DISEASES IN LOUISIANA

Dr. J. A. O'Hara, Epidemiologist for the State of Louisiana, has furnished us with the weekly morbidity reports for the State of Louisiana, which contain the following summarized information: For the week ending October 19, the forty-second week of the year, the following diseases were reported in figures greater than ten: 98 cases of malaria, 45 of gonorrhea, 39 of pneumonia, 30 of pulmonary tuberculosis, 29 of syphilis, 26 of diphtheria, 23 of cancer, 21 of whooping cough, 13 of typhoid fever and 10 of scarlet fever. Typhoid fever cases were reported generally throughout the State. Caddo Parish had 4 cases, being the only Parish with more than 2 cases. Two cases of poliomyelitis were reported from Orleans Parish and 1 from St. Landry. One case of typhus fever was reported in Orleans Parish. Epidemic cerebrospinal meningitis was reported from E. Carroll, Iberia and St. Landry Parishes, and 1 case of undulant fever was reported from Bossier. The following week, ending October 26, malaria had jumped to 157 listed cases. There were also reported 55 cases of pulmonary tuberculosis, 47 of pneumonia, 33 of typhoid fever, 28 of diphtheria, 26 of syphilis, 22 of cancer, 20 of whooping cough, 14 of scarlet fever, 13 of measles and 12 of influenza. Typhoid fever cases were listed from all over the State, Washington 2, Richland 2, Ouachita 4, and Franklin 3, these parishes being the only ones to have more than 2 or more cases. One case of smallpox was reported from Caldwell Parish. Two cases of poliomyelitis from Jefferson Davis and 1 from Jackson Parish. One case of undulant fever was reported from Rapides. The forty-fourth week of the year, ending November 2, there was a drop in the number of cases of malaria listed, only 39 being reported this week, followed by 25 of pneumonia, 21 each of pulmonary tuberculosis and cancer, 20 of diphtheria, 18 of gonorrhea, 15 of scarlet fever, 14 of syphilis, and 10 of whooping cough. Ouachita Parish reported 3 cases of typhoid fever this week. One case of epidemic cerebrospinal meningitis originating outside of New Orleans was reported through Orleans Parish. For the week ending November 9, the morbidity fig-

ures show that there were 73 incidences of malaria discovered by doctors of the State and reported to the State Board of Health. Other diseases carried in double figures include 54 cases of pulmonary tuberculosis, 30 of pneumonia, 25 of cancer, 23 of diphtheria, 16 of whooping cough, 14 of septi-cemia, and 13 each of typhoid fever, syphilis and influenza. Lafayette Parish with 3 cases of typhoid fever was the only one to have more than 2 cases in this week. Three cases of cerebrospinal meningitis were reported, 2 from Orleans and 1 from Avoyelles. This week likewise, there were 4 cases of poliomyelitis one each from Iberville, Jefferson, Orleans and Washington. It is interesting to note that each week 1 or more cases of poliomyelitis have been reported for many weeks.

This terrifying and disturbing disease has certainly been markedly prevalent in the past few months.

### HEALTH OF NEW ORLEANS

The Department of Commerce, Bureau of Census, reports that for the week ending October 12 there were reported in the city of New Orleans 147 deaths divided 69 white and 78 colored making the death rate for the 3 groups 15.9, 10.5, and 29.2 respectively. The infant mortality rate for this week was 89, largely as a result of the negro infant mortality rate of 158. For the succeeding week, ending October 19 there was a slight jump in the total number of deaths, there being 157, of which 92 were white and 65 colored. The death rate of the group as a whole was 17.0, the white 14.0 and the negro 24.3. The infant mortality for this week was 119, again due to a high negro infant mortality rate, which was 205. For the next week there was a very susceptible drop in the total number of deaths which was 125 and the death rate for the group as a whole was 13.5, the rate for the white race being 10.7 as a result of 70 deaths and for the colored 20.6 due to 55 deaths. The infant mortality rate this week was only 24 due to a substantial reduction in the number of infant deaths in the city for this week. For the week ending November 2 the death rate was 15.5, for the white race 12.8 and for the colored 22.1. The total deaths this week were 143, divided 84 white and 59 colored. Infant mortality was 65. For the last week for which we have reports, ending November 9 there were only 128 deaths making a death rate of 13.9. The white deaths numbered 67 the rate being 10.2 and the colored 61 with a rate of 22.3. The infant mortality rate this week was 53.

So far this year the death rate is somewhat higher than it was in 1934. Comparing the first 45 weeks of the year, the rate is 16.1 for 1935 contrasted with 15.7 for 1934. It should be noted that the death rate among the white population is

usually half or even more than half of that of the colored. Were it not for the colored population, the death rate in the city of New Orleans would compare favorably with other cities in the United States.

### WOMAN'S AUXILIARY

#### Louisiana State Medical Society

"Hello Everybody! This is Station A-M-A announcing to you a radio program on 'Medical Emergencies and How They are met'". This series of broadcasts sponsored by the American Medical Association, will reach you each Tuesday over the Blue Network at 5:00 P. M. Eastern Standard Time, (4:00 P. M. Central Standard Time, 3:00 P. M. Mountain Time.) The National Broadcasting Company will put this program on in dramatic form with incidental music. Ask your local station to bring this program in.

The subsequent programs will be announced in Hygeia.

Help your Auxiliary by listening to this program and tell your friends about it. Do not stop there. Go further and tell the organizations to which you belong about this program also, i.e., Parent-Teacher groups, Women's Clubs, Church Auxiliaries, etc., so that they too, may derive the benefits therefrom.

Tune in and listen in! Let that be our slogan for the duration of these broadcasts!!

Dear reader, remember also that the articles and editorials appearing in the *BULLETIN of the AMERICAN MEDICAL ASSOCIATION* are compiled for your information. Each member can educate herself as to auxiliary activities throughout the country by reading this *BULLETIN* regularly.

A Board Meeting of the Woman's Auxiliary to the Louisiana State Medical Society was held at the home of the President, Mrs. Herman B. Gessner, 119 Audubon Blvd., New Orleans, on Wednesday, October 30. We were very happy to have Mrs. C. P. Gray, first Vice-President of Ouachita Parish with us at this meeting. Mrs. Gray was the only out-of-town member of the Board to meet with us and told us some very interesting things about the Monroe Auxiliary.

The Organization Committee, under the Chairmanship of Mrs. S. M. Blackshear, New Orleans, is "up and at 'em" in the parishes still unorganized, and we hope next month to have a very good report to give you.

Plans for "Doctor's Day" on March 30 were discussed but as yet, nothing definite has been outlined. However, this Day tends to be "the day among days", as rightly it should be to each one of us, and it is the hope of each Parish President that each member will join in the carrying forth the plans of this celebrated day.

It was decided at this meeting that the State Auxiliary send each parish auxiliary a copy of the American Medical Association News—Letter at each publication.

Mrs. George D. Feldner,  
Chairman, Press & Pub.

### CADDO PARISH

Mrs. J. E. Rooks gave a most interesting talk on child health education to the Shreveport Medical Auxiliary, using the following outline:

#### A. Health Education taught by

1. Mother
2. Teacher
3. Health Nurse.

#### Mother:

1—Trains pre-school child

#### Teacher:

1—Teaches health habits in hand-washing drills and teeth cleaning.

#### Nurse:

1—General Health Service

(a) Examination of eyes and teeth, glasses furnished by P.T.A.

2—Personal Hygiene

(b) Discussed by school doctor

#### B. Health work by organization

1. Junior League
2. American Legion Auxiliary
  - (1) Prevention of Blindness
  - Sightsaving classes

#### C. Child's Feeding

1. Milk and lunches

#### D. What Medical Auxiliary can do

1. Work on health committee whenever called upon
2. Examination for own children.

Mrs. Johnson R. Anderson  
Chairman, Press & Publicity

### CLAIBORNE PARISH

The Woman's Auxiliary to the Claiborne Parish Medical Society met at 2:30 on Wednesday November 13 in the club rooms of the Woman's Department club, City Hall, Homer. Mrs. C. B. Erickson of Shreveport, Coucilor for the 4th District was the guest speaker. She gave a very interesting and instructive talk on Auxiliary work. Mrs. John T. Crebbin of Shreveport was also present. Dr. H. R. Marlatt, Director of Claiborne Parish Health Unit was present and told of the tubercular condition of the Parish and the value of the famous Christmas seal. It was voted the Auxiliary sponsor the seal sale this year.

Born to Dr. and Mrs. S. A. Tatum on September 17 an 8½ pound son named Sherwood Austin after the proud daddy.

Mrs. E. A. Campbell was seriously injured in an auto accident on November 8 while returning from a Federated club meeting at Natchitoches when the car struck loose gravel. Mrs. Campbell suf-

fered a broken jaw and other cuts and bruises. She was taken to a Shreveport sanitarium where she remained a patient for a week.

Mrs. H. R. Marlatt, Secretary

## MISSISSIPPI STATE MEDICAL ASSOCIATION NEWS

### THE ASSOCIATION MAKES A CHANGE

The Mississippi State Medical Association at its meeting in May voted to change its official publication effective January 1, 1936. Accordingly this number of the *New Orleans Medical and Surgical Journal* is the last that the members of the Association will receive by virtue of membership.

For a number of years our Association has shared its Journal with the Louisiana State Medical Society and the Orleans Parish Medical Society and the relations have been without exception most pleasant. We have been fortunate in the association. The *New Orleans Medical and Surgical Journal* is one of the oldest in the country, it is read extensively and often quoted. Its Journal Committee has been most liberal in the space allotted to Mississippi. Last year Mississippi had 31 per cent of the scientific articles, 33 plus per cent of the scientific pages, 76 per cent of the hospital staff transactions, and 67 plus per cent of the news pages. The 90 cents per member paid by the Association was less than the cost of publication.

Sincere thanks and the best of good wishes are due and go to the editor-in-chief, the business manager and the journal committee.

In January you will receive the first number of your new official journal, *The Mississippi Doctor*. The Mississippi State Medical Association will share this publication with the Northeast Mississippi Thirteen County Medical Society, the North Mississippi Medical Society and the Mid-South Postgraduate Medical Assembly. It is printed in Mississippi and Dr. W. H. Anderson of Booneville is its editor. The papers presented at the last meeting of the Association have been fairly divided and a number will appear in the forthcoming issues before the next meeting of the Association.

Your editors wish to express their appreciation at this time to the officers of the Association, the component societies, the county editors, the hospitals, the Woman's Auxiliary, and all others who have contributed so generously to Mississippi's official journal in the past. We ask your continued support that the Association's section of *The Mississippi Doctor* may be better than ever before. Dr. Anderson has promised the space. Let's fill it every month with material of interest to every doctor in Mississippi.

To *The Mississippi Doctor*, as the official publication of the Mississippi State Medical Association, and to Dr. Anderson, "Here's to you and here's our support and best efforts."

### TO THE OFFICERS OF THE MEDICAL SOCIETIES IN MISSISSIPPI

My Dear Doctors:

The membership drive is getting off to a good start! The reports that are coming in indicate that the membership committees are at work. One of the larger societies has already reported an increase of thirty-three members. How about your society? Have your membership committees been appointed? Are they active? Let us all get busy! Let us put this drive over for new members in real earnest. Enlist the services of every member of your society, to go out after the eligible doctors who are not already members of your society.

Personal work is the best of all. The personal appeal to the doctor who is eligible, by some of the officers and members of the medical societies will practically always result in the doctor giving you his application.

Remember that December is the best month to pay dues for the year 1936. I would suggest and urge that you make your drive include every member as well as the non-member to pay his dues for 1936 in December. He can do it then as good as any time, and if it is delayed, there is always danger of a controversy over the medico-legal question. Let us all pay our dues in December. If we will do this, it will be one of the greatest steps that organization can put over.

I desire to take this opportunity to extend to you my sincere thanks for your hearty co-operation. I hope that you will also permit me at this time to extend to you and through you to the members of your society, the Season's Holiday Greetings. I trust that your happiness may be the greatest in the history of your life for 1936.

Please give me a report on the progress you are making in your society, right away. If I can assist you in any way, please call on me.

Faithfully yours,

Harvey F. Garrison, President-Elect,  
Mississippi State Medical Association.

### MEMBERSHIP

The following letter was promulgated and is being dispatched by the Monroe County Medical Society to each licensed physician in the county.

Dear Dr.

In the current issue of the Mississippi Doctor there appears a very timely letter from Dr. Harvey F. Garrison, our president-elect of the State



Medical Association. He, by virtue of his office, is chairman of the membership committee of the association.

In this letter he, very properly, stresses the urgent reasons why every licensed physician in Mississippi should hold membership in the Association. He calls attention to the fact that the future of medicine is trembling in the balance. There is a strong probability that regimentation of the practice of medicine is imminent. If and when this comes, politics will enter into the equation to such an extent that our patronage and compensation will depend entirely upon the will of the political overlords. Only by organization and cooperation of the members of the profession can this step be averted. Hence, it is clear that if no higher motive than self interest should actuate us, every doctor in Monroe (as well as other counties) should apply for membership. But happily there are many other and higher reasons why all should enroll at once. First among these higher reasons is duty to the public whom you are obligated to serve; for NO doctor who does not affiliate with his co-workers and attend their meetings can possibly keep abreast of medical progress. Medical science is NOT a fixed science—it is ever and rapidly developing. Any man who does not contact his fellow practitioners, constantly, will surely fall behind them in the pursuit of medical knowledge and his clientele will be the sufferers. Next every doctor who is worthy of title can, if he will, add something to the sum total of medical knowledge. It thus becomes his solemn duty to enlist and do his part in forwarding the progress of his chosen profession. In union there is strength, growth and progress. We need *you—you* need us. We appeal to *you—won't you* join us now and let us present a solid front, 100 per cent strong? The fight is on—join the ranks. It will make us to be happier men—better doctors, and the public will appreciate us more.

Yours fraternally,

G. S. Bryan,  
Membership Committee.

#### DIRECTORY AND CALENDAR MEDICAL SOCIETIES

Information is not complete. Secretaries of societies are urged to send in full data so that it may be known when the societies of the state meet and the names of the officers directing their activities this year.

ADAMS COUNTY MEDICAL SOCIETY: E. E. Benoist, Natchez, president; W. K. Stowers, Natchez, secretary. Meets third Tuesday each month, Natchez, 7:30 P. M.

AMITE COUNTY MEDICAL SOCIETY: D. H. Thornhill, Crosby, secretary.

CENTRAL MEDICAL SOCIETY: W. B. Dobson, Jackson, president; L. W. Long, Jackson, sec-

retary. Annual meeting, Thursday, December 5, Robert E. Lee Hotel Roof, Jackson, 5:00 P. M.

CLAIBORNE COUNTY MEDICAL SOCIETY: E. P. Jones, Harmanville, president; G. W. Acker, Port Gibson, secretary.

CLARKSDALE AND SIX COUNTIES MEDICAL SOCIETY: J. L. Nichols, Alligator, president; N. C. Knight, Clarksdale, secretary. Meets fourth Wednesday of March and second Wednesday of November, Elks Club, Clarksdale, 2 P. M.

CLARK-WAYNE COUNTIES MEDICAL SOCIETY: W. P. Gray, Waynesboro, president; Albert Hand, Shubuta, secretary.

DELTA MEDICAL SOCIETY: P. G. Gamble, Greenville, president; F. M. Acree, Greenville, secretary. Meets second Wednesday of April and October, rotates through five counties. 2 P. M.

DESOTO COUNTY MEDICAL SOCIETY: A. J. Weissinger, Hernando, president; L. L. Minor, Route 4, Memphis, secretary.

EAST MISSISSIPPI MEDICAL SOCIETY: H. L. Arnold, Meridian, president; L. V. Rush, Meridian, secretary.

FRANKLIN COUNTY MEDICAL SOCIETY: L. Costley, Meadville, secretary.

HANCOCK COUNTY MEDICAL SOCIETY: A. P. Smith, Bay St. Louis, secretary.

HARRISON COUNTY MEDICAL SOCIETY: H. K. Rouse, Lyman, secretary.

ISSAQUENA-SHARKEY-WARREN COUNTIES MEDICAL SOCIETY: F. Michael Smith, Vicksburg, president; Leon S. Lippincott, Vicksburg, secretary. Meets second Tuesday each month, Elks Club, Vicksburg, 7:00 P. M.

JACKSON COUNTY MEDICAL SOCIETY: J. N. Lockhard, Pascagoula, president; R. G. Lander, Pascagoula, secretary. Meets second Thursday of March, June, September and December, Jackson County Hospital, Pascagoula, 7:00 P. M.

JEFFERSON COUNTY MEDICAL SOCIETY: W. T. Harper, Fayette, secretary.

NORTH MISSISSIPPI MEDICAL SOCIETY: W. W. Philips, Oxford, president; A. H. Little, Oxford, secretary. Next meeting New Albany, January.

NORTHEAST MISSISSIPPI THIRTEEN COUNTIES MEDICAL SOCIETY: S. R. Deanes, West Point, president; A. J. Stacy, Tupelo, secretary. Next meeting Tupelo, December 17.

PIKE COUNTY MEDICAL SOCIETY: J. L. Bauer, McComb, president; Elise Rutlege, McComb, secretary. Meets first Thursday each month, McComb, 6:30 P. M.

SOUTH MISSISSIPPI MEDICAL SOCIETY: J. Gould Gardner, Columbia, president; F. T. Bower, Hattiesburg, secretary.

STONE COUNTY MEDICAL SOCIETY: Earl W. Green, Wiggins, secretary. Meets with Harrison-Stone-Hancock Counties Medical Society.



**TATE COUNTY MEDICAL SOCIETY:** W. D. Smith, Senatobia, president; J. Sidney Eason, Coldwater, secretary. Meets second Wednesday each month, Senatobia.

**TRI-COUNTY MEDICAL SOCIETY:** H. R. Fairfax, Brooklyn, president; R. B. Zeller, Hazlehurst, secretary. Meets second Tuesday of March, Copiah-Lincoln Junior College, Wesson; June, Walthal Hotel, Tylertown; September, Riverside Hotel, Monticello; December, Whitworth College, Brookhaven, 12:30 P. M.

**WILKINSON COUNTY MEDICAL SOCIETY:** E. M. Butler, Centreville, secretary.

**WINONA DISTRICT MEDICAL SOCIETY:** P. B. Brumby, Lexington, secretary.

#### MISSISSIPPI HOSPITALS

##### CALENDAR OF STAFF MEETINGS

**ANDERSON INFIRMARY:** Second Friday, each month, 6:00 P. M.

**BILOXI HOSPITAL:** First Friday, each month, 7:30 P. M.

**CLARKSDALE HOSPITAL:** Second Wednesday, each month, 1:30 P. M.

**GEORGE C. HIXON MEMORIAL HOSPITAL:** First Monday, each month, 7:30 P. M.

**JACKSON COUNTY HOSPITAL:** Second Thursday, each month except July and August, 7:00 P. M.

**MERIDIAN SANITARIUM:** Second Thursday, each month, 6:30 P. M.

**MISSISSIPPI BAPTIST HOSPITAL:** Third Tuesday, each month, 6:30 P. M.

**NORTHEAST MISSISSIPPI HOSPITAL:** First Monday, each month, 7:30 P. M.

**U. S. VETERANS HOSPITAL, GULFPORT:** Every Monday, Tuesday, Wednesday and Thursday, 10:45 A. M.

**VICKSBURG INFIRMARY:** First Wednesday, each month, 7:00 P. M.

**VICKSBURG SANITARIUM:** Tenth or week of the tenth, each month, 6:30 P. M.

**WINONA INFIRMARY:** First Thursday, each month, 7:30 P. M.

#### HOSPITALIZATION OF THE INDIGENT

Dear Editor:

I have not written you this year as I am not the editor and the county has not elected one for this year. But as you ask that I spill what was on my mind and heart for the doctors in Mississippi I am still fighting for our hospital program for Mississippi and to distribute the funds so that the most good can be done at the least expense to the state.

If the program as outlined at the meeting of the state medical association and the state hospital association committees which was adopted in the meeting with the budget commission can be passed by the law making body and put into effect

for four years we will have the greatest aid that we have ever had for the poor and unfortunate sufferers.

I feel that if we can have the plan for the remodeling and equipping of the charity hospital at Jackson and make an A-1 standard hospital as a clearing house for our other hospitals and for special work and equip it with real equipment for the latest and best treatment for cancer and research work and with complete appliances for fracture and orthopedic work, we then can handle all acute cases in the smaller hospitals.

I would then like to see a modern and approved internship given in connection with this and the asylum and the tuberculosis sanitarium. I do not believe a better internship could be had in the whole country than can be given in this set up.

May I urge that every doctor begin with his representatives and senators now and tell them that we are only asking for fifteen cents per capita for charity and that is to be allotted to the counties according to the population and that if the bill is passed that their county will get the benefit just the same as the other counties are now doing and no one else can take it away from them and the charity sufferer can be treated anywhere in the state that an approved hospital is located.

Just this week I had a talk with a doctor of our state that had attended a medical meeting in a southern state and the prediction was made on the floor of the meeting that ten years and we will not be able to have any more medical meetings such as we have now and that we will be under the yoke of state medicine. I shudder at the thought and feel that if the program that is sponsored by the Mississippi State Hospital and Medical Associations are carried out and the medical men in Mississippi will stand to their posts we will not be the party to such a move and when we wear such a yoke we will wear it only as prisoners in the hands of an enemy and never as an honor. To be honest, little do I believe you and I are going to wear it at all for I believe we have MEN with principles, guts and friends in our profession and we can win and must win.

R. B. Caldwell,  
Councilor, Third District.

#### OBSTETRICS

The postgraduate obstetric class, composed of the doctors of Prentiss County, and additional ones from Tishomingo, Lee and Tippah, assembled at the Northeast Mississippi Hospital, Booneville, for the last lecture of the course, desires to express our very sincere appreciation for the wonderful series of lectures we have received from Dr. Maxwell E. Lapham. These lectures have been timely and practical and very instructive and helpful in every way.

We feel that this is the best possible plan that can be used to help the busy practitioner in the small rural communities, many of whom are unable to leave their practice and go away to take postgraduate work, having no one to do it for them while they are gone. Dr. Lapham not only covered the practical points in the obstetrics field in his course of lectures but we were greatly benefited by his counsel and advice in many of our private cases. We cannot imagine any one better suited for this course of lectures than he. We thank him very graciously for his untiring efforts in helping us in every way possible and we also want to thank Dr. Underwood, the State Board of Health, the State Medical Association, Tulane University and the Commonwealth Fund for making this course available to us. We sincerely hope that we may have the benefit of another course of lectures on some other subject, as pediatrics, at an early date. We believe it is of the greatest importance to bring postgraduate instruction out to the busy practitioner.

Respectfully submitted,

Postgraduate Class of Prentiss,  
and Adjoining Counties

#### COURSE IN OBSTETRICS

On October 24 a series of ten lectures, one a week, was completed in New Albany, by Dr. Maxwell E. Lapham.

These lectures were sponsored by an appropriation from the Mississippi State Medical Association, Tulane University Schools of Medicine, the Commonwealth Fund, the Mississippi State Board of Health and each individual physician attending the lectures.

The average attendance for these lectures was more than 80 per cent. There was a general expression of appreciation for the postgraduate course and the general comment was that each attending physician felt that the time spent was well worth while and that he had gotten something out of the course.

The consensus of opinion is a hope that other courses will be sponsored. Instead of obstetrics and gynecology, no doubt, a similar course in pediatrics or internal medicine would be highly appreciated.

The above was written by Dr. I. B. Trapp. I did not get to attend more than half of the lectures. I think they were fine and hope we can get a course on medicine later.

S. E. Eason

#### POSTGRADUATE COURSE IN OBSTETRICS

Announcement of Fifth Circuit: November 4—  
November 29.

<i>Centers</i>	<i>Day of Beginning</i>
Houston	Monday, November 4
Pontotoc	Tuesday, November 5

(Hours and places of meetings subject  
to change by the groups)

FIELD CLINICIAN AND LECTURER: Dr.  
Maxwell E. Lapham, Philadelphia.

OUTLINE: 1. Early Diagnosis of Pregnancy.  
2. Progress of Pregnancy, 3. Abortion 4. Hemorrhage in Pregnancy and Puerperium 5. Toxemia of Pregnancy 6. Management of Normal Delivery 7. Some abnormal Positions and Presentations 8. Postpartum Care 9. Care of Newborn 10. Gynecological Complications of Pregnancy.

METHODS: Then meetings of two hours, one for lecture, one for clinical demonstrations and round-table discussions. Effectiveness of demonstrations will depend upon availability of patients, who can be seen by the Field Clinician only upon recommendation of members of the classes. Dr. Lapham's out-of-class hours will be devoted to instruction in any manner desired; for instance, physicians may arrange with him for practical applications by means of examinations of patients in their own offices.

SCHEDULE OF CLASSES: Houston, beginning Monday, Nov. 4 at 2:00 P. M. in basement of post-office. Local committee in charge of arrangements and clinical material: Dr. Douglas D. Baugh, chairman, Dr. F. L. McGahey, Dr. J. James, Dr. E. F. Arnold.

Pontotoc, beginning Tuesday, Nov. 5, at 2:00 P. M. in Dr. R. P. Donaldson's office. Local committee in charge of arrangements and clinical material: Dr. R. P. Donaldson, chairman, Dr. W. H. Reid, Dr. Z. A. Dorsey, Dr. A. M. McGregor, Dr. E. B. Burns.

NOTE: The Houston class embraces the following territory: Calhoun, Chickasaw, Choctaw, and Webster Counties.

Q. Edward Gatlin, Secretary  
Committee on Postgraduate Medical Education  
Mississippi State Medical Association  
P. O. Box 770, Jackson, Mississippi

#### MISSISSIPPI STATE BOARD OF HEALTH

On November 8, Dr. Felix J. Underwood is to preside over the Health and Mental Hygiene section of the State Social Workers' Conference. The meeting will be held at the Robert E. Lee Hotel. Dr. M. E. Lapham, who is conducting the postgraduate obstetrical lecture courses in Mississippi, and Dr. William D. Hickerson, in charge of the Field Tuberculosis Diagnostic Unit, will be the speakers the morning of November 8.

Dr. W. K. Sharp, Jr., assistant surgeon, U. S. Public Health Service, with headquarters at New Orleans, was a recent visitor to the State Board of Health.

The meeting of the State Nurses' Association was well attended and the program was very interesting. Sincere congratulations are offered

the new president, Miss Mary E. Dorsey of Greenville. She will adorn and dignify the place.

Felix J. Underwood  
Executive Officer

#### MISSISSIPPI STATE NURSES ASSOCIATION

The Mississippi State Nurses Association at its annual meeting November 2, elected officers as follows: President Mary E. Dorsey, R. N., first vice-president, Verna L. Clark, R. N. Vicksburg; second vice-president, Mary D. Osborne, R. N., Jackson; third vice-president, Mary H. Trigg, R.N., Greenville; fourth vice-president, Catherine Kent, R.N., Jackson; fifth vice-president, Sue Collins, R.N., Biloxi; secretary, Bertie Jones, R.N., Sanatorium; treasurer, Cleta Kitchens, R. N., Greenville.

The next meeting of the Association will be held in Vicksburg.

#### DEATHS OF MISSISSIPPI PHYSICIANS

Dr. J. H. Kennedy, Pinola, October  
Dr. W. C. Caraway, Forest, October  
Dr. J. Charles Buckely, Bay St. Louis, October.  
Dr. J. R. Lockhart, Sherard, October  
Dr. J. W. Gray, Clarksdale, November.

#### DR. JAMES WILLIAM GRAY

Dr. J. W. Gray, Clarksdale, died November 7, at his home. He had been in failing health for several years and for the past twelve months had been unable to attend to his practice. For a week preceding his death he had been critically ill and under the care of local physicians who were his personal friends.

Dr. Gray was born in Holly Springs, April 16, 1865. He was licensed to practice medicine in Mississippi in 1887 and practiced in Myotte from 1887 to 1889. He received his doctors degree from the Kentucky School of Medicine in 1890, and from that time has practiced in Clarksdale.

He was councilor of the first district of the Mississippi State Medical Association in 1907 to 1908 and president of the Association in 1908 to 1909. He was the father of the medical defense feature of the Association. He had served as president of the Clarksdale and Six Counties Medical Society and as president of the Tri-State Medical Association, 1917-1919. He was a fellow of the American Medical Association.

Dr. Gray married Miss Margaret Roberts December 8, 1891. They had two children, James W., Jr., and Agnes.

For many years he served as a member of the Clarksdale school board and before the city adopted a commission form of government was alderman for a number of years. He was vice-president of the Bank of Clarksdale. He was junior warden of St. George's Episcopal Church.

Dr. Gray is survived by his wife, his son and daughter, three grandchildren, a brother and three sisters.

A kindly man, sympathetic and sincere, he drew men to him and held them fast friends by his loyalty and willingness to serve.

T. M. Dye

#### ADAMS COUNTY MEDICAL SOCIETY

The regular monthly meeting of the Adams County Medical Society was held October 15 at the Natchez Charity Hospital with eight members in attendance.

Dr. J. W. D. Dicks read a paper on "Useless Surgery."

The Adams County Medical Society and the Homochitto Valley Medical Society extends greeting and best wishes for 1936 to their Sister Societies, and hope we will fall in line with Dr. Hill's suggestion, and materially increase our membership of the State Association for 1936.

Mississippi has too many physicians who are eligible and not members.

Lucien S. Gaudet

#### CENTRAL MEDICAL SOCIETY

The November meeting of the Central Medical Society was held at the Mississippi State Hospital, Whitfield. The society was guest of Dr. J. M. Acker, superintendent of the new hospital, and his staff.

The hospital was opened for inspection at 3:00 o'clock and a good many doctors availed themselves of the opportunity to see the grounds and buildings.

The program began at 5:30 P. M. and included three case reports by Drs. E. S. Busby, A. L. Monroe, and J. E. Brown, a case presented by Dr. Hollowell and a paper, "The Importance of Complete History In Diagnosing Psychiatric Conditions," by Dr. W. H. Watson.

Dr. A. Street, Vicksburg, was introduced as the guest speaker and presented a paper on "Improved Methods in Roentgen Therapy of Malignant Conditions." This paper was well presented and discussed.

The meeting was then adjourned to the banquet hall where a fried chicken dinner was served to about 70 members.

L. W. Long,  
Secretary

The annual meeting and banquet of the Central Medical Society will be held at the Robert E. Lee Hotel, Thursday, December 5. The principal speaker on the program is Dr. James S. McLester, president of the American Medical Association. Drs. Paul Gamble, Greenville, and J. Gould Gardner, Columbia, are also on the program. A large



gathering of physicians from Mississippi is planned. There will be a social hour from five to six P. M., with banquet at 6 P. M., and the program will follow the banquet.

L. W. Long,  
Secretary

#### CLARKSDALE AND SIX COUNTIES MEDICAL SOCIETY

The sixty-seventh semi-annual session of the Clarksdale and Six Counties Medical Society was held at Clarksdale Wednesday, November 13. The program as announced by the secretary, Dr. N. C. Knight, was as follows:

##### AMERICAN LEGION HUT—2 P. M.

Business Session

Scientific Session:

Appendicitis in Children—Dr. Eugene Rosamond, Memphis.

Hypertension—Dr. S. D. Robinson, Clarksdale.  
Dental Cripples—Dr. Felix J. Underwood, Jackson.

The Pathology of Syphilis—Dr. L. B. Austin, Rosedale.

Peeping Around the Corner in Medicine and Surgery—Dr. John Darrington, Yazoo City.

Recess

##### ALCAZAR HOTEL—7 P. M.

Banquet and Entertainment

President's Address—Dr. J. L. Nichols, Alligator.

Agranulocytosis (Stereoptican Illustrations)—Dr. H. G. Rudner, Memphis.

Discussion: Dr. J. J. Shea, Memphis, Tenn.

#### ISSAQUENA SHARKEY WARREN COUNTIES MEDICAL SOCIETY

A regular monthly meeting of the Issaquena-Sharkey-Warren Counties Medical Society was held at the Elks Club, Vicksburg, Tuesday, November 12 with twenty-five members and four guests present. Dr. F. Michael Smith, president, presided.

After a supper served at 7 P. M. and the reading of the minutes, the following scientific program was presented:

1. Gross Lesions of the Three Most Common Heart Diseases.—Dr. Robert H. Potts, New Orleans.

Discussed by Drs. W. P. Robert, L. S. Lippincott, B. B. Martin, Jr., and W. K. Purks.  
Dr. Potts closed.

2. The General Management of Rheumatic Heart Disease—Dr. L. J. Clark, Vicksburg.

Discussed by Drs. W. E. Johnston, Robert H. Potts, and W. K. Purks. Dr. Clark closed.

3. Some Special Problems of the Diagnosis and Treatment of Rheumatic Heart Disease.—Dr. W. K. Purks, Vicksburg.

Discussed by Drs. L. J. Clark, T. P. Sparks, Jr. for W. H. Parsons, and Richard W. Young. Dr. W. K. Purks closed.

Dr. W. K. Purks, Vicksburg was program chairman and presided during the scientific session.

Substitute resolutions presented by the Committee on Public Health and Legislation at the last meeting and tabled for study, were read and adopted as follows:

WHEREAS, the incidence of unjustified personal damage suits is increasing, and

WHEREAS, the filing of unjustified malpractice suits against members of the medical profession is coincidentally becoming more prevalent, damaging the reputation of the physicians sued in particular and the whole medical profession in general even when the suit is successfully defended, and

WHEREAS, To successfully carry such fraudulent cases through our courts requires the collusion of unscrupulous members of the medical and legal professions,

THEREFORE, BE IT RESOLVED, That it is incumbent upon the medical and legal professions, the state legislature and the courts of justice to solve this problem, and further,

That the Issaquena-Sharkey-Warren Counties Medical Society do heartily condemn such practices and pledges itself to aid in every way to prevent and defeat them.

To this end, the following suggestions are made:

1st. When any responsible interested party shall call to the attention of the president of this Society that a member of it has given legal testimony in a personal damage or malpractice suit, and represents that such testimony was false and untrue, the president shall be empowered to appoint an investigating committee of three members, (preferably the Board of Censors) to investigate the matter. If their investigations reveal that the member physician has given untrue, partial or biased testimony, the Society shall expel him from membership, and from organized medicine, giving full publicity to their actions, and request the State Board of Medical Examiners to revoke his license to practice medicine.

2nd. The Society shall memorialize the House of Delegates of the Mississippi State Medical Association to adopt similar rules of action.

3rd. The Society shall memorialize the House of Delegates of the Mississippi State Medical Association to request the cooperation of the Mississippi Bar Association requesting it to adopt and carry out similar rules and take such other steps as may seem necessary.

The annual meeting of December 10 was discussed and the following committees were appointed by the President for the occasion:

BANQUET—Drs. F. M. Smith, L. S. Lippincott, E. H. Jones.



OPEN HOUSE—Drs. G. C. Jarratt, P. S. Herring, J. S. Ewing, J. A. K. Birchett, Jr., W. P. Robert, G. P. Sanderson, A. Street.

AUTOMOBILES—Drs. L. J. Clark, C. J. Edwards, W. E. Johnston, N. B. Lewis, B. B. Martin, Jr., T. P. Sparks, Jr.

OFFICIAL GUESTS: Drs. B. B. Martin, Jr., I. C. Knox, H. H. Johnston, W. C. Pool, R. A. Street Jr.

PAST PRESIDENTS' REUNION—Drs. S. W. Johnston, W. H. Parsons, W. H. Scudder, H. H. Haralson, G. M. Street.

GENERAL RECEPTION—Drs. W. K. Purks, A. K. Barrier, J. B. Benton, J. A. K. Birchett, M. J. Few, G. W. Gaines, H. S. Goodman, T. W. Huey, D. A. Pettit, W. A. Smith, D. P. Street, E. B. Stribling, H. B. Wilson.

It was announced that 22 of the 25 past presidents of the Mississippi State Medical Association now living in the state have signified their intentions of attending the December meeting. Fifteen officers of the State Medical Association, including Dr. J. R. Hill, president, and Dr. Harvey F. Garrison, president-elect, will also be present. The officers of the Louisiana State Medical Society have been invited. Other members of the State Associations of Mississippi and Louisiana will be extended invitations.

Dr. Henry Brown Goodman, Anguilla, was elected to membership.

An invitation was received from the Central Medical Society to attend the annual meeting at Jackson on December 5, and Dr. F. Michael Smith, president, was elected as official representative of this Society.

The next meeting of this Society will be held Tuesday, December 10. The program will include open house and planned visits to points of interest during the afternoon, a banquet at 7 P. M., and the following scientific presentations:

Gas Gangrene—Dr. Battle Malone, Memphis, Tennessee.

Some Aspects of the Pellagra Problem—Dr. Virgil P. Sydenstricker, Augusta, Ga.

Consideration and Management of the More Common Types of Diarrhea and Constipation.—Dr. Philip W. Brown, Rochester, Minn.

Officers for 1936 will be elected at this meeting.

#### NORTH MISSISSIPPI MEDICAL SOCIETY

The North Mississippi Medical Society held its fourth quarterly meeting at Oxford, Friday, October 9, in the Graduate Building on the University Campus where it was called to order at 2:15 by the president, Dr. W. W. Phillips. The invocation was given by Rev. John Stephens, pastor of the Methodist Church, Oxford. Minutes of the preceding meeting were read and adopted.

The secretary announced a postgraduate course in obstetrics consisting of ten lectures and clinics

by Dr. Lapham, beginning in Oxford, December 2.

The Society voted to accept the Tate and DeSoto County Medical Society members into the North Mississippi Medical Society unofficially and treat them as members until official action could be taken at the next Council meeting at the State Association meeting.

Drs. E. V. Bramlett and R. J. Criss, Jr. were elected to membership.

The Society voted to hold the October meeting each year in Oxford and to hold the other quarterly meetings at various cities in the district by invitation. An invitation was extended from New Albany for the January meeting and was accepted by the Society.

The Society voted to eliminate vice-presidents from each county and to elect only one from the counties at large.

Officers elected for 1936 are as follows: President: Dr. R. G. Grant, Holly Springs; Vice-President: Dr. J. S. Donaldson, Oakland.

County	Delegate	Alternate Delegate
Benton	J. H. Ferrell	J. J. McGowan
Lafayette	F. E. Linder	E. V. Bramlett
Marshall	Ira B. Seale	R. G. Grant
Panola	J. M. Anderson	A. P. Alexander
Tippah	John E. Tate	A. V. Murry
Union	S. E. Eason	H. P. Boswell
Yalobusha	L. S. Brown	R. J. Criss, Sr.

Secretary: A. H. Little, Oxford.

The following papers were presented:

- (1) "Some Helps in Kidney Disease" (with lantern slides).—Dr. Leon S. Lippincott, Vicksburg.

Discussed by Drs. A. H. Little, J. A. K. Birchett, Jr., and S. E. Eason.

On motion of Dr. S. E. Eason the Society requested Dr. Leon S. Lippincott to send his paper to the "Mississippi Doctor" for publication.

- (2) "Acute Circulatory Failure."—Dr. Otis S. Warr, Memphis.

Discussed by Drs. J. C. Culley, P. W. Rowland and S. E. Eason.

- (3) "Football Injuries of the Knee", with slides and motion picture.—Dr. Willis Campbell, Memphis. Discussed by Drs. J. C. Culley and Leon S. Lippincott.

In addition to the numerous members of the Society who were present the following guests were registered: Dr. J. R. Hill, Corinth, president of the Mississippi State Association; Drs. A. J. Weissinger and J. M. Wright, Hernando; Drs. Leon S. Lippincott and J. A. K. Birchett, Jr., Vicksburg; Dr. J. Gould Gardner, Columbia; Dr. D. C. Funderburk, Olive Branch; Drs. W. D. Smith and H. F. Byers, Senatobia; Dr. Gilruth Darrington, Yazoo City.

Dr. B. S. Guyton, acting dean, and Chancellor Butts represented the University of Mississippi

School of Medicine at the recent meeting of the Association of American Colleges at Toronto.

A. H. Little,  
Secretary

#### PONTOTOC COUNTY MEDICAL SOCIETY

Pontotoc County Medical Society met in regular session November 5. Dr. Maxwell E. Lapham began his course of obstetrical lectures on that date. We had seven physicians present at the first meeting and ten on the second on November 7. This course consists of ten lectures and we have one every other day.

R. P. Donaldson

#### TALLAHATCHIE COUNTY MEDICAL SOCIETY

The Tallahatchie County Medical Society met at its regular monthly meeting on Friday, November 1, at Sumner. There were 13 physicians and one dentist present. I believe we have one of the best and most interested set of doctors in the state. The same old faithful crowd is always on hand.

A Dutch supper was served at the cafe which was enjoyed by all. Dr. G. C. (Buster) Denson of Vance is always present to give advice on most any question and relate some interesting experiences. Anyone who has trouble getting their charity patients into state charity institutions or who has trouble collecting their bills should write Dr. Denson for information.

New officers elected for the ensuing year were—D. G. Bardwell, Charleston, president; J. W. Moody, Charleston, vice-president; J. E. Powell, secretary and treasurer.

Dr. Lacy Biles, county health officer, Sumner, made a short address emphasizing the importance of inoculation of the school children against communicable diseases and soliciting the support of all physicians in getting the school children examined and the tests made.

Pyosalpinx and acute pelvic conditions were the chief subjects for discussion. The discussion was opened by J. W. Moody after which there was a general discussion.

The next meeting place will be at Tutwiler. Dr. Denson invited us to meet at Vance for a duck supper if we would bring the ducks.

J. W. Moody

#### ADAMS COUNTY

It is with keen regret the members of the medical profession learned of the death of Dr. T. E. Ross of Hattiesburg. The medical profession of Mississippi has met with a great loss. Dr. Ross was a leader in medicine and surgery, and the sympathy of all who knew him go out to his family.

Dr. Bryan in his materful style gave us something to meditate on. His paper "The Universal

Challenge,"—Ewing Fox Howard Oration, was a classical delivery but we could expect nothing else from one who uses the pen in so versatile a manner. Whatever Dr. Bryan writes, is always read with pleasure and leaves us better fitted to cope with the problems of life. To have known Dr. Howard was to love him, to know Dr. Bryan is to do the same. No discourse is necessary on his thoughts of the cancer problem, as he covers that thoroughly.

Sincere good wishes to all members of the profession and their families for a Merry Christmas and a most prosperous New Year.

Lucien S. Gaudet  
County Editor

#### AMITE COUNTY

Not much news this month from Amite County. We notice that a membership drive for doctors, not at present associated with organized medicine, is to be put on over the state. We have one hundred per cent in Amite County.

We received the booklet on proper nomenclature as regards causes of death and feel that it will be of great assistance to us as well as to our state statisticians if we will only take the time to consult it.

"Believe it or not," but interesting at least. My grandfather who was a surgeon in the civil war, delivered Dr. W. E. Brumfield, oldest member of our medical society. Dr. Brumfield in turn delivered a certain lady of a daughter and in turn, it became my duty recently to deliver this lady's daughter of a daughter.

W. T. Thornhill,  
County Editor

#### CHICKASAW COUNTY

Dr. Maxwell E. Lapham of Philadelphia, Penn. is at present conducting a series of postgraduate lectures in obstetrics at Houston and at Pontotoc on alternate days under the auspices of the State Medical Association. His splendid lectures are well attended.

The doctors of Chickasaw County have organized to force collection of bills under the name of the Medical Economic Bureau of the Chickasaw County Medical Society. The names of delinquents are turned over to the secretary, who furnishes each physician with a copy of the names of all delinquents so that cash in advance will be required of those who will not pay the regular family physician.

The plan has been in effect for two weeks and already doctors reports a very favorable response.

Douglas D. Baugh  
County Editor

#### COAHOMA COUNTY

Dr. I. P. Carr, Clarksdale, attended the "Ole Miss"—Florida football game in Oxford a couple

of weeks ago, at the same time visiting friends there.

We are glad to report at this time that Dr. T. G. Hughes has almost completely recovered from an automobile accident last summer in which he sustained a severe injury to his knee as well as other minor injuries. He has resumed his active practice.

Dr. T. M. Dye was a business visitor in Pontotoc, Jackson, and other points during the month. Dr. Dye and Dr. D. H. Raney are planning to attend the annual convention of railway surgeons in Chicago in November.

Several physicians here including Drs. Barrett, Griffin, Knight, and others, are planning to attend the meeting of the Southern Medical Association in St. Louis in November. A most profitable and pleasant meeting is anticipated by all.

The staff of the County Health Department was increased the first of October by the addition of a dental hygienist, Miss Josephine Porter, Como. Miss Porter has had excellent training in this work in Memphis, Tenn. and until recently has been assistant to Dr. Towner of that city. Miss Porter is now busily engaged in carrying out a program of dental prophylaxis under the direction of Dr. N. C. Knight, county healthy officer.

Dr. I. W. Barrett, Clarksdale, formerly with the Crisler Clinic at Memphis, will build a two-story clinic in Clarksdale at a cost of \$10,000.

The structure will be situated on the west end of the old Cutrer Square. Work on the ground has commenced. Dr. Barrett states that the structure will be completed in three months. The building will be reinforced concrete and hollow tile construction.

Plans were prepared by Lyman Abbott, architect. The general contract was awarded to W. R. Ellis, Clarksdale contractor. Materials will be furnished by the M. L. Virden Lumber Co. of Clarksdale. An air conditioning system will be installed by McGregor, Inc., of Memphis.

This clinic will consist of two stories, servants' living quarters and four garages. The first floor will consist of reception rooms for white and colored, clerks' offices, treatment rooms, private offices, roentgen ray and dark room, bath room, lavatories and laboratory.

The second floor will be a completely furnished penthouse apartment which will serve as Dr. Barrett's living quarters. The entire structure is being built along modernistic lines and will be air-conditioned throughout.

At the present time Dr. Barrett anticipates operating the clinic alone.

Dr. LeRoy Wilkins was a business visitor to Jackson during the month.

N. C. Knight,  
County Editor

## DESOTO COUNTY

We had the pleasure of a visit from our esteemed friend, Dr. T. M. Dye, Clarksdale. In years gone by his father was pastor of our home church. Dr. T. W. Dye was a gallant soldier under the Stars and Bars of the Confederacy and no less valiant under the Banner of the Cross. A worthy son of a worthy father. Melville and Mrs. Dye are the parents of six fine sons, of whom they are justly proud.

The North Mississippi Medical Society had a fine meeting at the University on October 18. The program and the attendance were both unusually good. Dr. W. W. Phillips is president and Dr. W. W. Phillips is president and Dr. A. H. Little secretary of this progressive organization. Both of these gentlemen reside in Oxford.

The doctors and their families of this county are all in good health and spirits and feel more inclined to carry-on than they did in the early 1930's.

Mrs. A. J. Weissinger, accompanied by her daughter, Mrs. W. B. Kountz and children in St. Louis. Dr. Weissinger visited this city earlier in the year.

Dr. C. Whitley Emerson left recently for Mobile to fish in the bay and gulf for a few days. He was joined at West Point by his father-in-law, Dr. I. W. Dotson, and friends.

Dr. O. C. Brewer, Jayes, Southwest Mississippi, has located in Ponton this county. Prior to four years ago Dr. Brewer lived at Eudora.

L. L. Minor,  
County Editor

## FORREST COUNTY

Dr. S. E. Bethea opened the deer season at Vinegar Bend, Alabama, November 1. He has been getting about on crutches since then and relates a story about stumping his toe while carrying a heavy buck. He still insists that the buck did not run over him.

Dr. J. P. Culpepper, Jr., enjoyed an outing on the Gulf Coast during the first week in October. He was the guest of General B. H. Markham, head of the American Petroleum Institute of New York. The number of fish caught is immaterial, for, he says a good time was had by all.

Dr. V. Carlton Temple spent two weeks in Nashville, Tennessee, recently, visiting old friends and clinics.

Dr. F. T. Bower attended the World's Series and saw all the games played in Detroit.

Dr. R. H. Clark also visited Detroit, attending the International Medical Congress.

Dr. C. C. Buchanan has recently returned from the Balyeat Hay Fever and Asthma Clinic in Oklahoma City, Okla., where he took a short course of study on these subjects.



Among the Hattiesburg doctors expecting to attend the meeting of the Southern Medical Association in St. Louis, are Doctors W. W. Crawford, C. C. Buchanan, J. P. Culpepper, H. L. McKinnon, and T. E. Ross. Dr. Buchanan is to appear on the program.

T. E. Ross  
County Editor

#### HINDS COUNTY

Dr. William R. K. Beck has announced the opening of his offices at 215-217 Standard Life Building, Jackson. He will give special attention to roentgen ray and radium superficial and deep therapy, dermatology and syphilology.

#### ISSAQUENA COUNTY

On account of the local political situation here the attention of the entire country has been directed to Issaquena County since the August primaries. At that time one of our two factions bolted the Democratic primary in a body.

The other faction went right ahead with the primary, and nominated the regular Democratic ticket strictly according to law.

Obviously the bolters had two objects in view; first, to gain more time to put over their bold deal; and, second, to knock out those unfortunates who could vote in a Democratic primary, but could not vote in the general November election. This masterful coup would have eliminated ten per cent of the voters of the county, who, almost to a man, had stood by the regular primary. They were of the property owners, the substantial citizens of the county, who had not been able to pay ALL taxes assessed against them.

However, the Legislature met meantime, and restored to the DELINQUENT PROPERTY TAX-PAYERS their right to vote. They were thus placed on an equal footing with the floating population, with those people who have no interests in the county, and pay no taxes whatever except their poll tax.

In such cases the press usually makes use of such terms as "fraudulent elections, steals," etc. But Issaquena's skirts are free from such accusations. Instead of a STEAL, it was strictly a DEAL, a business transaction, open and above board. There was nothing done in the dark, or under cover, but everything was open and above board.

This is the first time since we ran out the Carpet Baggers and Republicans years ago that Issaquena has elected anybody to office except a Democrat. No wonder the people sat up and took notice. This interest was not confined to the South alone, but the people of the North were interested.

It is so unusual for a Democrat to be beaten for office in Mississippi that it is said one of the

great Northern Dailies wired congratulations to one of our successful bolters. They do not know anything about bolters up there. The ignorance of a great newspaper is amazing! Up there they have two parties, Democrats and Republicans. They do not know that we have no Republicans in Issaquena, but just straight out Democrats and crafty bolters.

W. H. Scudder,  
County Editor

#### JASPER COUNTY

Dr. J. W. Stringer, Stringer, is convalescing nicely after a tonsillectomy.

Dr. J. J. Tatum, Montrose, the most aged doctor in the county, continues very feeble.

Dr. J. B. Thigpen, Bay Springs, expects to attend the meeting of the Southern Medical Association in St. Louis.

J. B. Thigpen  
County Editor

#### LEFLORE COUNTY

Miss Louise Sandifer, daughter of Dr. and Mrs. F. M. Sandifer, Greenwood, was married to Mr. William Claude Hicks, Inverness, at the First Presbyterian Church, Greenwood, at 5:30 P. M. October 1. Dr. F. M. Sandifer, Jr., New Orleans, brother of the bride was one of the groomsmen. He returned to New Orleans October 2.

Dr. T. B. Holloman, Itta Bena, spent Sunday, October 6, in Helena Ark., visiting his daughter Mrs. W. W. Boone.

Dr. J. H. Kennedy, Pinola, father of the late Dr. J. P. Kennedy, Greenwood, died at his home in Pinola, October 7, and was buried in Jackson, October 8.

The following doctors of Greenwood attended the meeting of the Delta Medical society at Moorehead, October 9: Drs. L. A. Barnett, J. A. Crawford, W. E. Denman, W. B. Dickins, L. F. Ferguson, and L. B. Otken.

Dr. Mildred Clark, Omaha, Neb., secretary-treasurer of the Nebraska Medical Association, was a visitor to Dr. Ruth Dean, October 10.

Dr. Tate Carl, Memphis, Tenn., visited in the home of his father Mr. A. S. Carl, Greenwood, Sunday, October 12.

Dr. E. R. Shurley, Money, is in the Veterans Hospital, Washington, D. C., for treatment.

Dr. W. A. Berryhill, Eupora, visited friends in Money, October 15.

Dr. and Mrs. R. L. Segrest, Wisner, La., attending the funeral of Mr. J. C. Osborn, father of Mrs. Segrest, who died in Greenwood, October 15.

Dr. W. E. Denman spent his vacation, October 15 to 20 visiting relatives in Tennessee.

Dr. and Mrs. W. B. Dickins attended the wedding of their son, Dr. R. D. Dickins, and Miss Anna Edwards at Monticello, Ark., October 17.



Dr. and Mrs. W. H. Frizell, Brookhaven, visited their daughter, Mrs. Herbert McShane, Greenwood, October 21 and 22.

Dr. Fred Adams, New York, N. Y. visited his brother, Dr. J. C. Adams, here October 29, on his way to attend "Homecoming" of Tulane. Dr. and Mrs. J. C. Adams and daughters, Mona and Yancey, accompanied Dr. Fred Adams to New Orleans for a few days' visit.

Wishing a Merry Xmas and Happy New Year to all the county Editors, county societies and hospitals of the state, and Dr. Lippincott, our editor in chief, I bring to a close my news items.

W. B. Dickens  
County Editor

#### MONROE COUNTY

Of a truth, time and tide do not lag. Christmas comes on apace. At that glad time we remember friends and are made very happy by evidence that they remember us. Since this is to be my last communication before the yuletide, I send to each of you, my friends, my best, my heartiest, my cheeriest Christmas greetings. My wish is that this may have been a good year and may much joy be yours in contemplation of the sum total of the experiences that have come to you. May I dare suggest that after the "breathing spell" that will be yours (and mine) during the holidays, that we take up the duties of the coming year with renewed hopes and courage—that we realize that while the fight is, by no means, ended, that we are (or should be) better prepared to fight the winning fight then we have been before. It seems to me that light is breaking through the darkness—that, perhaps, a brighter, happier day is dawning. Much water has flown under the bridge, but the bridge still stands, and water still flows. The members of our profession have borne well their part in the conflict. Notwithstanding the distressed state of things—even though the foundations of all organized society and civilization have been made to tremble, we have stood firm. The devotion to duty that has always characterized our membership—the hungering for and striving after truth and knowledge has not been lessened in any sense. Some of our friends and compatriots have fallen—but they fell in honorable combat and we are both duty-bound and happy to bless their memory. Their dying hands flung to us the torch. It is ours to hold it high. Let us not betray them nor their faith in us. Much more is in my heart and on my mind, but your interest and patience may not keep pace with my desires. So permit me to say to one and all of you I wish you a merry and happy Christmas time.

There is no sickness among my doctors nor in their families. They are the finest bunch of "fellows" to be found on the face of the globe. I love and cherish them all. Our county society

met last night in monthly conclave. It was a good and interesting meeting.

G. S. Bryan,  
County Editor.

#### NEWTON COUNTY

Now the year is drawing to a close we trust the same upward trend in business will continue. It has been a much better year for us than any since 1929.

The past month has been a rather busy one with the medical connections in this vicinity. We have just been advised that Mr. M. L. Flynt, Jr., son of Dr. M. L. Flynt, joint owner of the Newton Infirmary, has merited one of the highest honors that can be received in a medical fraternal order, that of membership in Alpha Omega Alpha fraternity, same having been conferred on him on account of his rating in class. Mr. Flynt is a student in Tulane Medical College, New Orleans, having entered on a Commonwealth scholarship, and will graduate at the end of the present term.

Dr. Omar Simmons, active-superintendent of Newton Infirmary, recently made a trip to the Mayo Clinic visiting other hospitals enroute in Chicago. Dr. Simmons was accompanied by Mrs. Simmons.

Mrs. W. G. Gill and daughter, Frances, of Jackson, visited in the home of Dr. and Mrs. Dudley Stennis.

Mrs. H. G. Greer, Anguilla, daughter of Dr. T. E. Jarvis, has been visiting her mother and father here in anticipation of an heir apparent who made his arrival October 19, being a son whom they have named H. C. Greer, 3rd. Both mother and son are getting along fine.

Dr. W. E. Box, who has been absent from his office for the past several weeks on account of illness, resumed his practice November 7. He is much improved.

Mrs. Box underwent a minor operation in Newton Infirmary and is making a splendid recovery.

Capt. Hughes B. Jenkins, assistant district surgeon of Ft. Barrancas, Fla., was here on an inspection tour of C. C. C. Camps and hospitals that serve the camps the first week of November.

Dr. J. M. Campbell, C. C. C. Camp, Roberts, has been relieving Dr. Robinson in Meridian; Dr. E. A. Cleve, Burns Camp, has been looking after the medical department of Roberts Camp and Dr. Vonnice Hall, Morton Camp, has been doing the surgery. Dr. Campbell is expected to return November 12 and each will resume his regular assigned work.

Miss Juanita Osborne, niece of Drs. Jno. T. and Chas. Gibbons, New Orleans, and Dr. S. E. Osborne, C. W., Columbus, as one of 26 girls in a special Greenwood, has been especially chosen at M. S. dancing group to be presented there November 22 which presents an adaptation of Folkin's "Les

Sylphides." music by Chopin. Miss Osborne is the daughter of Mr. and Mrs. M. B. Osborne of this city.

Newton is to witness one of the largest air festivals in the history of the state November 11 when Al and Fred Key and their famous "Ole Miss" will give a demonstration of their refueling feature. Maj. O'Keefe of Biloxi, for whom the local port is named, will be present. Maj. Chénault with his "flying trapeze" will give a demonstration of army maneuvers. Maj. Roscoe Turner has been invited to be present, as well as all high officials of the state, including present and elect governors, senators and Senator Heflin of charge of first aid headquarters. C. C. C. Camp Alabama. Local C. C. C. Camp doctors will have ambulances will also be in readiness for any emergencies and C. C. C. Camps boys will be on special patrol duty. The Jackson American Legion drum and bugle corps, said to be one of the best in the state, will also be on the program.

With every good wish for you, other counties, societies and hospitals and their personnels for a splendid Christmas and the most prosperous New Year we have ever had, we are

Newton Infirmary,  
Mrs. Scottie Kemp,  
Secretary.

#### PONTOTOC COUNTY

We are sorry to report the death of Mrs. J. W. Gillispie, Serman, on October 18. Dr. Gillispie died a little less than two months before Mrs. Gillispie.

Dr. O. F. Carr, Pontotoc, was called to Longview, Texas, Monday afternoon to attend his aunt, Miss Ada Miller. Miss Miller's home is in Pontotoc, but she was viting in Longview and fell and broke her hip. We wish her a speedy recovery.

Several of our Pontotoc County physicians are planning to attend the meeting of the Southern Medical Association at St. Louis which begins November 19.

The Northeast Mississippi 13 County Medical Society will meetin Tupelo December 17.

R. P. Donaldson,  
County Editor.

#### SUNFLOWER COUNTY

The Delta Medical Society held its regular meeting in Moorhead last month and was well attended by members of the society as well as a large number of visitors. The scientific program was held in the afternoon in the auditorium of the Sunflower Junior College. The highlight of the program was a paper on "Diseases of the Thyroid" by Dr. Carl Crutchfield Nashville, Tenn. Other papers were read as follows: "Comatose Malaria" by Dr. W. S. Taylor, Isola; "Malaria" by Dr. I. I. Pogue, Scott; "Hydatiform Mole," with case report

by Dr. W. B. Dickins, Greenwood; "The Relationship of the County Health Officer to his Community" by Dr. H. B. Cottrell, Indianola; "The Changes in the Eye Grounds in Systematic Disease" by Dr. L. C. Davis, Greenville. Following the scientific program an enjoyable barbecue was given for the doctors and their families.

Dr. H. L. Howard began practice in Indianola October 1. He comes to Indianola from New Albany, where he served as a camp surgeon for three C. C. C. Camps.

Dr. and Mrs. B. F. McNeal, Moorhead, motored to the Gulf Coast last week to visit their daughter.

Dr. J. C. Herrington, Rome, says he waited a long time to have his first wreck, but finally got it at the expense of a broken rib.

H. B. Cottrell,  
County Editor.

#### TALLAHATCHIE COUNTY

Dr. and Mrs. J. E. Powell spent two days in Jackson and one day in Clarksdale last week.

Mrs. Moody, who has been confined to the hospital and her home for the last month, is able to be up.

Dr. C. F. Freedland, Glendora, was a visitor to the Charleston Hospital a few days ago when he brought a patient for roentgenograms.

Dr. Donaldson, Oakland, was a visitor to the Charleston Hospital last week.

The duck season opens soon, some of the doctors will be hard to keep up with during the duck season.

J. W. Moody,  
County Editor.

#### TISHOMINGO COUNTY

X-mas greetings to every county county society and hospital in Mississippi. Hope all your future will be filled with joy and happiness. The ten of us physicians in Tishomingo County seem more prosperous and happy than we were a year ago. It is the good fortune of the writer to see each physician at least twice if not more each month in the year.

Dr. Brockstone has just returned from Chicago where he took a short course in the clinics of Cook County.

We are very glad to have had Dr. H. C. Ricks, director of county health units in Mississippi, with us this month. Dr. Ricks met the Board of Supervisors and induced them to put in a full time health department in Tishomingo County again to take effect January 1, 1936.

The T. V. A. is assuming one-third of the financial burden. Drs. Galloway and T. Paul Haney, the two Commonwealth health department directors in Mississippi, were the first two full-time health department directors in Tishomingo County. We feel like the organization will be permanent

now. We hope to secure offices in the new \$10,000 agricultural building, soon to be erected in Iuka.

T. P. Haney, Sr.,  
County Editor.

#### WARREN COUNTY

Erasmus says, "It is the worst of madness to learn what has to be unlearned." So Dr. Augustus Street is reported to have taken things very gradually on his recent visit to the Mayos at Rochester, as he dislikes very much the process of unlearning.

Drs. Preston Herring and W. H. Parsons are the reported members of the medical profession who saw the football game at Canton played by the Vicksburg and Canton High School teams.

We are advised that the Mississippi Editor of the New Orleans Medical and Surgical Journal, Dr. Leon S. Lippincott, was a visitor this month to the North Mississippi Medical Society when same was convening at Oxford. The Mississippi doctors, we think, are justly proud of their editor and the excellent work he has done as editor of the Mississippi section of the journal.

Dr. J. A. K. Birchett, Jr., says that in his extensive reading he saw in "Poor Richard's Almanac" where Ben Franklin said, "Glass, China, and reputation, are easily cracked and will never be mended," and thinking old Ben might be right about this, Jack, on his last trip abroad, to safeguard his reputation had an escort, Dr. Leon Lippincott, and further advises he enjoyed the last meeting of the North Mississippi Medical Society.

Congratulations to Dr. and Mrs. Tommy Sparks! But let Tommy tell you what it is all about and thus he speaks!

"There came to port last Sunday eve

The queerest little craft,

Without an inch of rigging on,

I looked and looked—and laughed,

It seemed so curious that she

Should cross the unknown water,

And moor herself within my room—

My daughter! Oh, my daughter!"

"On what strange stuff ambition feeds," and what meat has our Caesar ate that he has grown so great? And why did Dr. George M. Street have to go to New Orleans, November 2, just to get "measured for a suit of clothes?" And why did Dr. Lawrence J. Clark have to toddle along just to shuffle portmanteaux? Could there have been any misunderstanding or misinformation about Colgate playing Tulane on this date? Was it true that the Colgate Manufacturing Company, for advertising purposes, showered the grandstands with "lipsticks powder puffs, etc." and that these two "Shieks of the Operating Room" came back with pockets, knapsacks, and traveling bags, bulging with equipment?

The city of automobile manufacturing, Detroit, Michigan, was the guest city of the International Postgraduate Medical Assembly in October, 1935, and Dr. R. A. Street, Jr., was the guest visitor at this meeting, from Vicksburg, the leading city in the production of mammoth doctors or a mammoth production of doctors.

The many friends of Dr. John M. Whitney, son of Mr. and Mrs. P. K. Whitney of Vicksburg, are pleased to learn that after completing a three months' postgraduate course in the Department of Pathology at Charity Hospital, New Orleans, he will now be associated with Dr. George H. Hauser, an eminent pathologist of New Orleans.

Dr. Nathan B. Lewis, faithful to friend and a friend to each patient, was found without ostentations discharging a friendly and professional duty on his visit this month to the State Sanatorium.

When these lines shall have reached your desk, Thanksgiving Day for this year will have been past, it's memory may abide especially if there is a "Hang Over" from excesses, etc. Nevertheless, one may fully concur with Will Carleton when he wrote:

Thanksgiving Day, I fear,

If one the solemn truth must touch,

Is celebrated, not so much

To thank the Lord for blessings o'er,

As for the sake of getting more!

Now it is not our purpose to intimate that any reader of the few who read these lines would desire to get or read more from the faltering pen of your scribe from Warren County, but indeed and in truth we are *thankful* that it has been our good fortune and privilege to be your County Editor from this month, October, two years ago. We think we know you better, we know our interest in you is greater, we have come to welcome the monthly arrival of the New Orleans Medical and Surgical Journal, with a greater interest, not just to reread what we have written, but to see and know in part what the doctors of our state are doing and what kind of cruel fate befalls them and theirs. We are *thankful* to all the editors of the New Orleans Medical Journal for all the kindnesses they have shown us through these years as our official Journal, and as perhaps this, or one other, may be our last letter, under these relationships, to be printed in this, one of the greatest, if not the greatest, of Southern Journals of Medicine, we feel that we voice the sentiment of all Mississippi doctors when we quote:

"Your bounty is beyond my speaking;

But though my mouth be dumb, my heart  
thank you."

H. T. Ims,  
County Editor.



## WASHINGTON COUNTY

Dr. J. S. Sanders, Leland, was elected president of the Washington County Medical Society at the last regular meeting. He was also elected vice-president of the Delta Medical Association at its annual meeting recently.

Dr. J. S. Sanders, Leland, received notification in a personal letter from Governor-Elect White that he was among those chosen to the incoming governor's staff. From now on it's "Colonel Sanders" instead of Doctor Sanders. Dr. Sanders was one of the leaders of White's campaign in Washington County and it was no surprise to his friends when the governor-elect named him as one of the incoming colonels on the new staff. Washington County and particularly the Leland box, Dr. Sanders' home precinct, went strong for Mr. White in both the first and second primaries.

Dr. and Mrs. J. F. Lucas, Greenville, motored to Omaha, Neb., where Dr. Lucas attended the meeting of the Central Association of Obstetricians and Gynecologists which was held October 10, 11 and 12. On their return trip they stopped by Lincoln, Neb. to witness the Minnesota-Nebraska football game.

Dr. J. A. Beals, Greenville, read a paper on "The Physician's Daily Obligation to Educate the Public about Cancer" at the October meeting of the Issaquena-Sharkey-Warren Counties Medical Society in Vicksburg.

The many friends of Dr. and Mrs. C. P. Thompson, Greenville, are delighted to know that Mrs. Thompson has completely recovered from a recent attack of influenza.

Dr. and Mrs. J. F. Lucas, Greenville, motored to New Orleans where they attended the Colgate-Tulane football game.

The many friends of Dr. A. J. Ware, Greenville, are delighted to know of his continued improvement.

Dr. E. T. White, Greenville, attended the Colgate-Tulane football game in New Orleans recently.

The many friends of Dr. D. C. Montgomery, Montbury, Greenville, delight in knowing he has completely recovered from an attack of influenza.

Dr. and Mrs. L. C. Davis and children, Greenville, attended the Colgate-Tulane game in New Orleans. While in New Orleans, Dr. Davis attended his class reunion.

Dr. and Mrs. F. M. Acree, Greenville, had as their house guests recently Dr. and Mrs. H. Lamons, Greenville, Tenn. Mrs. Acree honored Mrs. Lamons with a most delightful tea.

Dr. and Mrs. O. H. Beck, Greenville, were among those who attended the Greenville-Clarksdale football game in Clarksdale recently.

Dr. and Mrs. F. M. Acree, Greenville, have as their house guest Dr. Acree's mother, whose home is in Dover, Tenn.

Dr. J. W. Shackelford, county health officer of Washington County, Greenville, attended the meeting of the American Public Health Association which met in Milwaukee, October 4 to 10.

Dr. R. E. Wilson, Greenville, attended a business meeting of the Mississippi Pediatric Society of which he is president in Jackson. He was accompanied by Dr. J. W. Shackelford.

Mrs. T. B. Lewis, Greenville, attended a recent meeting of the Garden Club in Vicksburg.

Among the out of town doctors who were visitors in Greenville this past month were Dr. R. C. Finlay, Glen Allen; Dr. R. N. Crockett, Winterville; Dr. J. S. Sanders, Leland; Dr. F. M. Tindall, Sunflower; Dr. H. C. Kent, Indianola; Dr. W. E. Wiggins, Indianola; Dr. R. C. Smith, Drew; Dr. J. M. Hill, Moorhead; Dr. W. L. Ervin, Inverness; Dr. I. I. Pogue, Scott; Drs. W. P. Shackelford and S. L. Lane, Hollandale.

Dr. G. W. F. Rembert, Jackson, was a recent visitor to Greenville.

Dr. J. Rives, New Orleans, La., associate professor of surgery, L. S. U., was a recent visitor to Greenville.

The doctors of Washington County wish to extend Christmas Greetings to all the doctors and their families in Mississippi.

John G. Archer,  
County Editor.

## WINSTON COUNTY

Dr. E. L. Richardson's new home is nearing completion and they expect to move in a few days.

Dr. T. F. Kilpatrick, Noxapater, was in our city Saturday.

Dr. W. W. Parks and wife were called to see his sister-in-law in Memphis who is very ill.

Dr. S. W. Pearson was in Memphis this week on business.

The writer is suffering from an infection of right hand, but is somewhat improved at this writing.

M. L. Montgomery,  
County Editor.

THE WOMAN'S AUXILIARY TO THE  
MISSISSIPPI STATE MEDICAL ASSOCIATION

President—Mrs. Leon S. Lippincott, Vicksburg.  
President-Elect—Mrs. Adna G. Wilde, Jackson.  
Secretary—Mrs. H. C. Ricks, Jackson.  
Treasurer—Mrs. J. W. D. Dicks, Natchez.  
Press and Publicity Chairman—Mrs. Hugh H. Johnston, Vicksburg.

## FROM OUR PRESIDENT

This being the last issue of the JOURNAL that we may use officially, the members of the Auxiliary take this opportunity to publicly offer our sincere appreciation to the editor-in-chief of the New Orleans Medical and Surgical Journal and the



Journal Committee for their generosity to this Auxiliary in publishing its news and all articles submitted.

The Woman's Auxiliary to the Mississippi State Medical Association obligated itself to create a \$5,000 endowment fund for the benefit of the little children at the Preventorium. This year we have plans by which we hope to complete this fund. The State Parent-Teachers Association has agreed to cooperate with the Auxiliary in placing an educational program regarding the Preventorium in the public schools of Mississippi, at which time the school children will be given an opportunity to contribute their pennies towards the endowment fund. This fund is to be used exclusively for recreational purposes.

The week of February 17, 1936, anniversary of the founding of the Sanatorium, will be dedicated as "Preventorium Week." During that week educational programs will be furnished to all social, civic, business and luncheon clubs in the state. Newspapers will be asked to cooperate. Radio programs will be broadcast where there are available stations.

#### THE SEASONS GREETINGS

It is my greatest pleasure to send to each and every one of you my wishes for a very Happy Christmas, and a most prosperous New Year. In thinking of Christmas, we think of the Christmas seal sale. The members of this Auxiliary have always served in selling seals. We hope to continue with this work, and to increase the numbers of seals sold.

#### FROM THE NATIONAL PRESIDENT

**PROGRESS.** It is of utmost importance that we, as Auxiliary women, the torch bearers of the American Medical Association, should keep pace with the march of time, zealous in every effort to be informed on all matters pertaining to health, with the thought ever in mind that we cannot lead where we cannot go.

**AUXILIARY ETHICS.** The attitude of every Auxiliary member is of paramount consideration, for herein lies the one opportunity to show her bigness—or her littleness, perhaps. There must be a rearrangement of prejudices for prejudice and love cannot dwell in the same heart. Certainly prejudice should find no place in the hearts of women who are the standard bearers of those men who are the representatives of a high and noble profession. The law of human kindness should at all times be motivated by the key-note, **CONCENTRATION, COOPERATION, CONSECRATION.**

Mrs. Leon S. Lippincott.

Vicksburg.

#### THE WOMAN'S AUXILIARY TO THE ISSAQUENA-SHARKEY-WARREN COUNTIES MEDICAL SOCIETY

Many hearts were saddened by the death of one of the most beloved and valuable members of the Auxiliary to the Issaquena-Sharkey-Warren Counties Medical Society, Mrs. H. S. Goodman. Her bright manner and cheerful disposition were an inspiration to all who knew her and her passing has cast a gloom upon all.

Miss Sydney Johnston, daughter of Dr. and Mrs. S. W. Johnston, is a student at Brenau College, Gainesville, Ga.

Dr. and Mrs. Benson Martin have returned from a delightful vacation spent in motoring through Virginia.

Dr. and Mrs. C. J. Edwards spent the week-end in Starkville with their son Franklin who is a student at Mississippi State College.

Dr. and Mrs. George Street and daughters Polly Laurant Clark, and Dr. and Mrs. W. H. Parsons and Lois, Dr. and Mrs. Edley Jones, Dr. and Mrs. spent several days in New Orleans where they attended the Tulane-Colgate game.

Dr. and Mrs. Preston Herring and daughter have returned from a trip which extended as far as Louisville, Ky.

Dr. and Mrs. A. Street spent a delightful vacation in Chicago and Rochester.

Dr. and Mrs. I. C. Knox motored to Oxford to enjoy a football game.

Dr. and Mrs. T. P. Sparks are receiving the congratulations of their many friends upon the arrival of a daughter.

Mrs. Hugh Johnston and Mrs. Leon Lippincott motored to Moorhead where they attended an Auxiliary meeting.

Jack Ewing, son of Dr. and Mrs. J. S. Ewing, is a student at the University of Virginia where he is beginning his premedical course.

Mrs. Leon Lippincott spent several days in New Orleans.

The October meeting of the Auxiliary to the Issaquena-Sharkey-Warren Counties Medical Society was held in the Monroe Room of the Hotel Vicksburg. Mrs. J. S. Ewing, hostess, planned a delicious menu and arranged a beautiful centerpiece of flowers. Dr. Walter Johnston gave an excellent illustrated lecture on "Cripples."

Those who enjoyed the excellent program were: Mrs. C. J. Edwards, Mrs. M. H. Bell, Mrs. Sydney W. Johnston, Mrs. Leon S. Lippincott, Mrs. Benson Martin, Mrs. W. K. Purks, Mrs. W. C. Pool, Mrs. F. M. Smith, Mrs. J. S. Ewing, Mrs. Edley H. Jones, Mrs. W. H. Parsons, Mrs. George M. Street, Mrs. R. A. Street, Mrs. Lorraine J. Clark, Mrs. Hugh H. Johnston, Miss Zita O'Leary, and Mrs. Guy C. Jarratt.

Mrs. C. J. Edwards motored to Baton Rouge to see the football game between L. S. U. and Mississippi State.

Mrs. L. J. Clark,  
President.

#### THE WOMAN'S AUXILIARY TO THE DELTA MEDICAL SOCIETY

Mrs. H. L. Cockerham, Gunnison, was elected president of the Woman's Auxiliary to the Delta Medical Society at the semi-annual meeting held in conjunction with the assembly of the medical society at Sunflower Junior College in Moorhead.

Mrs. J. D. Simmons, Gunnison, was elected secretary and treasurer.

Vice-presidents elected included Mrs. S. D. Newell, Inverness, Sunflower County; Mrs. J. W. Jackson, Belzoni, Humphreys County; Mrs. J. C. Adams, Greenwood, Leflore County; and Mrs. J. A. Beals, Greenville, Washington County. A vice-president for Bolivar County will be appointed later.

Mrs. L. B. Otken, Greenwood, retiring president of the Auxiliary, was elected parliamentarian, succeeding Mrs. J. A. Beals, Greenville.

The Auxiliary members were welcomed to Sunflower Junior College by President Paul West. The response to the welcome was delivered by Mrs. J. A. Beals, Greenville.

Mrs. J. C. Pegues, Greenville, was the principal speaker of the afternoon.

Mrs. L. S. Lippincott, Vicksburg, state president of the Woman's Auxiliary and Mrs. Hugh Johnston, state chairman of press and publicity, were in attendance.

A splendid musical program was given by students of Sunflower Junior College.

After the meeting a tea was given by Mrs. R. M. Donald, Mrs. J. W. Lucas, and Mrs. U. S. Wasson, at the home of Mrs. Wasson.

The members of the Woman's Auxiliary met with the members of the Delta Medical Society at a barbecue held during the evening.

Mrs. J. D. Simmons,  
Reporter.

#### THE WOMAN'S AUXILIARY TO THE HARRISON-STONE-HANCOCK COUNTIES MEDICAL SOCIETY

The Woman's Auxiliary to the Harrison-Stone-Hancock Counties Medical Society held its first meeting of the fall season Wednesday afternoon at the home of the vice-president, Mrs. E. C. Parker, East Beach. This was the first meeting since the death in July of the president, Mrs. Elmer D. Gay, and the auxiliary held a memorial to her. Mrs. Daniel J. Williams paid the tribute and the members stood in silent prayer to her memory. At the request of Mrs. Parker, Mrs. Daniel J. Williams presided at the business session. A letter was read by Mrs. J. S. Laird, president-elect.

from Mrs. J. Bonar White, president of the Auxiliary to the Southern Medical Association, setting forth "What An Auxiliary Member Should Know." She emphasized that the auxiliary serves the medical profession and through the profession serves the public; and that the principal purposes of the auxiliary are in health, education, public relations, legislation, philanthropy and social. Mrs. Leon S. Lippincott, Vicksburg, had written the auxiliary a letter urging the increase in membership of all doctors' wives. The organization arranged to meet monthly instead of each two months as formerly, the meetings to occur each third Wednesday, and in addition to the business session a half hour's program will be given. The next meeting will be with Mrs. W. W. Cox and Mrs. E. H. Fahnestock as co-hostesses. The program will be on the Preventorium, with Dr. Emma Gay in charge.

At the social hour Mrs. Parker served party refreshments of pecan pie and coffee. Those present were: Mesdames Daniel J. Williams, J. S. Laird, Harry Reynolds, Charles A. Mack, George Melvin, W. W. Cox, C. A. McWilliams, R. F. Wafer, D. J. Rafferty of Pass Christian and guests Mrs. Priestly of New Orleans, Dr. Emma Gay and Mrs. Parker.

#### THE WOMAN'S AUXILIARY TO THE SOUTH MISSISSIPPI MEDICAL SOCIETY

Members of the South Mississippi Medical Society and Auxiliary have returned to their homes after attending sessions held in Columbia with Dr. and Mrs. J. G. Gardner. The medical society met at the Marion Hotel, while members of the Auxiliary assembled in the home of Dr. and Mrs. Gardner.

Guests were met at the door by Mrs. Gardner who in turn introduced Mrs. D. A. Ratliff, who escorted them to the solarium which was lovely with potted ferns and full cut flowers. Here a most delightful social hour was enjoyed. After the arrival of guests Mrs. Gardner invited them into the dining room which was beautiful in every detail.

The table was covered with a handsome cut-work cloth. At each end were burning tapers that enhanced the beauty of the exquisite and artistically arranged center bowl of lavender asters and lupin. Mrs. Ratliff poured tea from a silver service while Mrs. G. S. Daley served the guests a most delectable plate consisting of frozen fruit salad, dainty minced ham sandwiches, nuts, candy and cake.

Guests then returned to the solarium to enter into the business session. In the absence of the president, Mrs. Ernest Bthea, Mrs. Charles C. Fichtower presided. The secretary, Mrs. F. T. Bower, called the roll and read minutes of the previous meeting.

After hearing reports from various committees Mrs. Hightower gave a most interesting account of the meeting of the State Auxiliary which met in Biloxi in conjunction with the State Medical Association last May.

Four new members were welcomed into the Auxiliary, Mesdames J. G. Gardner, D. A. Ratliff, G. S. Daley and J. C. Conner. Those present in addition to the four new members were: Mesdames Charles C. Hightower, Richard H. Clark, J. P. Culpepper, Jr., P. E. Smith, F. T. Bower and Mrs. Leo H. Martin, Hattiesburg; Miss Ella McMahon of New Orleans; Miss Ida Hood and Mrs. L. L. Polk of Purvis.

After adjournment the guests enjoyed a sight-seeing trip over Columbia. At 6 o'clock the Auxiliary members joined their husbands at the hotel where the entire assemblage were guests of Dr. and Mrs. Gardner. Following a most bountiful menu, Dr. Gardner introduced Mr. Rawls, mayor of Columbia, who welcomed the society. Dr. Joe Green of Laurel responded.

Mrs. B. F. Coulter, accompanied at the piano by Mrs. Hugh White, sang two songs. Dr. Coulter, head of the Industrial Training School at Columbia, told in an interesting manner the purposes of the school and what he hoped to accomplish in the near future.

Governor-designate Hugh White and Mrs. White were then introduced. Mr. White welcomed the society and pledged his cooperation to the profession.

At the conclusion guests were reluctant to say good-night after such an inspiring as well as enjoyable meeting, but everyone left with many

happy memories of the meeting of the South Mississippi Medical Society and Auxiliary as guests of Dr. and Mrs. J. G. Gardiner in Columbia.

Mrs. P. E. Smith,  
Reporter.

#### HONOR ROLL

The following have contributed to this number of our Journal:

COUNTY EDITORS: Lucien S. Gaudet, W. T. Thornhill, Douglas D. Baugh, N. C. Knight, L. L. Minor, T. E. Ross, W. H. Scudder, J. B. Thigpen, W. B. Dickens, G. S. Bryan, R. P. Donaldson, H. B. Cottrell, J. W. Moody, T. P. Haney, H. T. Ims, John G. Archer, M. L. Montgomery.—17.

SOCIETIES: Adams County, Lucien S. Gaudet; Central, L. W. Long; Clarksdale and Six Counties, N. C. Knight; Issaquena-Sharkey-Warren; North Mississippi, A. H. Little; Pontotoc County, R. P. Donaldson; Tallahatchie County, J. W. Moody.—7.

HOSPITALS: Houston Hospital, Douglas D. Baugh; Newton Infirmary, Mrs. Scottie Kemp; Vicksburg Hospital, Dr. W. H. Parsons; Vicksburg Sanitarium.—4.

WOMAN'S AUXILIARY: Mrs. Hugh H. Johnston, Mrs. L. J. Clark, Mrs. J. D. Simmons, Mrs. P. E. Smith.—4.

OTHERS: Harvey F. Garrison, R. B. Caldwell, Postgraduate Class of Prentiss and Adjoining Counties, S. E. Eason, Q. Edward Gatlin, Felix J. Underwood, T. M. Dye.—7.

GRAND TOTAL—39.

THANK YOU AND MERRY CHRISTMAS.

## BOOK REVIEWS

*The Compleat Pediatrician*: By Wilburt C. Davison, M. A., D. S. C., M. D. Durham, N. C., Duke Univ. Press, 1934. Price, \$3.75.

Davison's novel book is an attempt to cull the facts of pediatrics from many ponderous textbooks and compress them into a thin compact volume. In this he has succeeded. Some readers will object to the intricacies and excessive fingerling necessitated by numerous cross references; a little practice should overcome this objection.

Weight for weight the book contains more sound information than any available pediatric textbook. Of outstanding value are the sections on treatment, diet, and laboratory tests.

The author expresses the hope that this book will be carried for quick reference in the physician's bag, like a stethoscope. His hope would have been better fulfilled had the cover been of a color and material that did not soil so easily.

M. MALLOWITZ, M. D.

*A Textbook of Laboratory Diagnosis*: By Edwin E. Osgood, M. A., M. D. 2nd Ed., Philadelphia, P. Blakiston's Son & Co., Inc., 1935. pp. 585. 27 textual figures, 10 colored plates. Price \$6.00.

This laboratory book, for it is out of the class of manuals, is designed for students and practitioners of medicine and covers the usual range of clinical laboratory diagnosis with the exception of bacteriology and serology (Wassermann and precipitin test) which are omitted.

A unique feature is an index *by diseases* from which references are obtained to various tests and interpretations throughout the subdivisions of the book.

The first part, consisting of 266 pages, is devoted to a dissertation on the laboratory phases of disorders of all of the organs and systems of the body and, taken in all, is certainly the most informative part of the book to the physician.



The sections on technic are abbreviated and sparsely illustrated with the exception of the section on hematologic methods, where the only criticism that can be offered is that the author is apparently unduly impressive of methods devised by himself. To determine the percentage of sugar in the urine to the second decimal place or to obtain the correct reading of hemoglobin to within a 1 per cent error is his object. The meticulous methods that he recommends, if employed generally, would undeniably improve the status of laboratory findings.

The adoption of Osgood's method of obtaining blood by venepuncture for all routine examinations is hardly applicable in the south. Citrated blood alters the appearance of malaria parasites and leukocytes to such an extent, even during the one hour period that he allows, that I would hesitate to recommend it to my students. The *proper* method of obtaining blood from the finger or ear lobe will give reliable findings for the blood picture and in no way compare with the troubles of venepuncture as a routine. Venepuncture should be done by physicians only. Very little of the blood work in this country gets beyond the technician.

The intestinal parasites were apparently drawn from old preserved material and are misleading in appearance, particularly the eggs of hookworm and ascaris and the strongyloides larva.

The exclusion of all other methods except the Osgood for determining hemoglobin is also questionable in view of the fact that it is not possible to chemically reproduce his standard solution. Standards must be obtained that are subject to his check, which is an insurmountable objection. It is far better to struggle along with less accurate methods until a practical solution of this problem has been arrived at. I frankly do not believe after many years of experience that the diagnosis of the type of anemia in actual practice depends upon any such fine determination as is stressed here.

As a reference book for the practitioner of medicine for the interpretation of findings, or for what laboratory procedures are indicated, this volume is exceedingly valuable. Many original thoughts, ideas and observations are included which indicates clearly that the author does not merely copy his manuscript, as is too frequently the case with medical authors.

F. M. JOHNS, M. D.

*International Clinics*, vol 2, June, 1935. Phila. J. B. Lippincott Co., 1935. Illus. pp. 327.

A veritable medical treasure are these quarterlies. This one contains numerous important medi-

cal articles ably and adequately written by authoritative authors. To mention only a few will give an idea of the quality of the volume. Thus, a "Discussion of Heart Pain" by Louis Hamman, M. D. and Walter W. Hamburger, M. D., "Masses in the Groin" by Isadore Cohn, M. D. and "Pneumonokoniosis" by Leroy U. Gardner, M. D. One cannot recommend this book too highly.

I. L. ROBBINS, M. D.

*Living Along With Heart Disease*: By Louis Levin, M. D. with a foreword by Thomas M. McMillan, M. D. New York. The Macmillan Co., 1935. pp. 126. Price, \$1.50.

This is a small book, intended for the laity and dedicated to the idea of justifiable optimism on the part of the cardiac patient as reflected in modern concepts of etiology, diagnosis, prognosis and treatment. It is a worthwhile pioneer endeavor.

I. L. ROBBINS, M. D.

*Diseases of the Mouth and Their Treatment*: By H. Prinz and S. Greenbaum. Phila. Lea and Febiger, 1935. Illus. pp. 602. Price, \$9.00.

This work by authors of reputation both Medical Doctors and one a Doctor of Dental Surgery, as well, is a contribution to a field not too abundant with good material. Dr. Prinz has long been outstanding in oral pathology and therapeutics as well as materia medica. It is a pleasure to read and study as noble a reference as this, where synonyms, definition, etiology, clinical pathology, symptoms, diagnosis, differential diagnosis and treatment are discussed together in good order with an accompanying photograph of the clinical picture.

The entire subject matter is treated as a medicodental problem which offers reliable information both to the medical man and dentist. A good text for any medical man's reference library.

F. HAROLD WIRTH, D. D. S.

*The Autonomic Nervous System*: Anatomy, Physiology, and Surgical Treatment. By Jas. C. White. New York, The MacMillan Company, 1935, pp. 386. Price, \$7.00.

This splendid and very practical monograph on the autonomic nervous system comes up to the usual excellence of the MacMillan Surgical Monograph series, edited by E. C. Cutler. The author has ably assembled the fundamental contributions of the anatomist, the physiologist, and the pharmacologist, as well as those of the internist and the neurosurgeon. His own large experimental and clinical experience first at Leriche's Clinic, Strasbourg, and later at the Massachusetts General Hospital, Boston, is reflected in his comprehensive discussions throughout the book. A total



of 622 representative references are given, distributed at the end of each chapter. This bibliography as well as the volume itself should prove a valuable vade mecum to the study of a still unsettled subject. This is a type of book to which one would like to refer again and again in the rapid elucidation of one's clinical and operative problems, dealing with those disorders involving the autonomic nervous system.

K. HOSSEI, M. D.

*Economic Problems of Medicine:* By A. C. Christie, B. S., M. D. New York, The MacMillan Co., 1935. pp. 242. Price, \$2.00.

In an interesting and understandable manner the author reconciles the altruism and idealism of our profession with the practicality and materialism of the economist and the business world. Never have we needed constructive thought along economic lines more than at present. Dr. Christie is to be congratulated on giving us a volume which contains so much food for thought. Present methods of medical care are unfortunately imperfectly adapted to the wants and needs of the time. This is due to a lack of understanding about fundamentals by both physicians and public. The many new economic problems which have been created by a complex and changing social and industrial system are intelligently discussed. These involve the duty of the physician to self, patient, profession and public.

Although figures are usually boring to physicians, the following information may interest some readers sufficiently to give impersonal thought to the economic problems of medicine. The average physician now begins practice at the age of about twenty-eight with an invested capital usually of \$10,000 and ten years of effort. After seven years of practice, his net income in 1929 was about \$5400 with an attendant expense in practice of nearly 40 per cent. Since then medical incomes have decreased approximately 33 per cent to 50 per cent, which means that the average physician's net income, after seventeen years of work and \$10,000 capital investment, is, at the present time, about \$2750. In most other fields of effort where productiveness also ceases usually around the age of 60, the financial returns from a similar investment of time, effort and capital are obviously far greater. Besides, the physician has no material assets in his professional capacity. Interesting information is given showing the relative earnings of specialists and of physicians in cities of different sizes. The latter half of this volume considers the various forms of medical practice under workman's compensation laws, health insurance, industrial medicine and the newer methods of medical care in an understandable manner. It should be read and re-read by those who are interested. A comprehensive plan for medical care which includes the trends now taking place in

practice is presented in the final chapter. Most of us try to escape reality by evading, in one way or another, the distasteful. Practical and impersonal thought about medical economics is avoided by physicians. Yet this very lack of practical understanding on the part of the average physician about economic problems is the cause of many medical headaches.

If you are interested in an impersonal constructive discussion of the medical dollar, the reviewer suggests that you read the volume and then re-read it. If you are satisfied with the social and financial trend of medical practice, believe in letting nature take its course, and want to continue believing that there is a medical Santa Claus, you had better read something else.

CHAS. A. BAHN, M. D.

*Diseases of the Skin:* By Frank Crozer Knowles, M. D. Philadelphia, Lea & Febiger, 1935. 3rd ed. rev. pp. 640. Price \$6.50.

This edition, like the parent edition is well arranged, compact and the material well selected. More space is given to the effects of good diets and salt-free diets. Allergy and allergic reactions have also assumed more consideration. This edition has been thoroughly revised and is larger than previous editions. Its compactness and arrangement makes an easy reference volume for the student or general practitioner.

M. T. VAN STUDDIFORD, M. D.

#### PUBLICATIONS RECEIVED

J. B. Lippincott Company, Philadelphia: Prescription Writing and Formulary, by Charles Solomon, M. D.

The MacMillan Company, New York: An Introduction to Public Health, by Harry S. Mustard, M. D.

The Commonwealth Fund, New York: Aphasia, by T. Weisenburg, M. D. and K. E. McBride, Ph. D.

Charles C. Thomas, Springfield, Ill.: Classical Contributions to Obstetrics and Gynecology, by G. Thoms, M. D.

The University of North Carolina Press, Chapel Hill, N. C.: The Collapse of Cotton Tenancy, by C. S. Johnson, E. R. Embree, W. W. Alexander.

William Wood & Company, Baltimore: Puerperal Gynecology, by J. L. Dubos, M. D., F. A. C. S.

W. B. Saunders Company, Philadelphia: Surgery Queen of the Arts, by Wm. D. Haggard, M. D., F. A. C. S., D. C. L.

# New Orleans Medical

and

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### THE COLLAPSE PROGRAM IN ADVANCED PULMONARY TUBERCULOSIS\*

C. A. THOMAS, M. D.

and

S. C. DAVIS, M. D.  
Tucson, ARIZ.

Collapse therapy has two appeals; its first appeal should be to the public health service because of the fact that if it is properly used, it isolates mechanically a carrier in every successful case. This, as a health measure, has up to the present time been entirely overlooked by the United States Public Health Service, by every state and every municipality of this country except Chicago. As an invitation for the public health men to further interest themselves in tuberculosis, I want to invite their attention to the fact that tuberculosis kills more people between the ages of 15 and 25 years than any other disease. It kills more people in this age period than diphtheria, scarlet fever, and small pox combined. Collapse therapy is offered as a quarantine measure of the greatest importance because if it is used early, it prevents cavitation and open cases. If successfully used in open cases, it establishes a quarantine within the patient's own body by giving the proper sputum conversion. Its second appeal is to the physician who is interested in pulmonary tuberculosis, especially those physicians who are called upon to treat advanced cases of this disease.

The National Tuberculosis Association figures, based on a survey of many sanatoria for the year 1928 with follow up, give this report:

Minimal cases entering sanatoria: 23 died in 5 years.

Moderately advanced cases: 67 died in 5 years.

Far advanced cases: 90 died in 5 years.

Of this group 88 with cavities 1-2 cm. in diameter died in 3 years.

According to Whitney, statistician for the National Tuberculosis Association, there are approximately 400,000 cases of tuberculosis in the advanced stages in the United States; and if 88 die in 3 years, certainly our sanatorium regime needs revision. We do not decry sanatoria nor a sanatorium regime; on the contrary, we recognize these as essential parts of the collapse program because of the systematic rest and high caloric diet they afford, as well as for their disciplinary and educational features.

The collapse program is the real structure built on the foundation of the sanatorium and its regime. Furthermore, in the institutions where the collapse program is used, it quickly converts them from more or less aristocratic boarding houses into active hospitals, and fills both the medical staff and patients with optimism. This type of therapy offers practically the only hope to cavernous cases of this disease and cures many patients whose condition would otherwise be entirely hopeless. When collapse therapy is used, many of these patients are being returned to active and happy lives no longer a menace to their families.

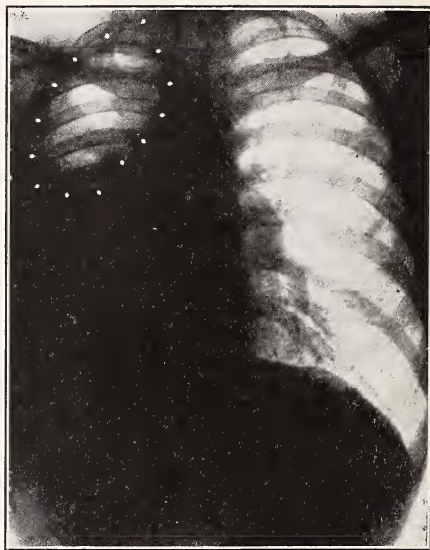
Pulmonary tuberculosis is a surgical disease from the time the diagnosis is made. Patients with pulmonary tuberculosis are as much entitled to surgery as patients with acute appendicitis, yet many good surgeons are still dividing tuberculosis into surgical and pulmonary diseases. The day has passed when surgery

\*Read before the Louisiana State Medical Society, New Orleans, April 29—May 1, 1935.

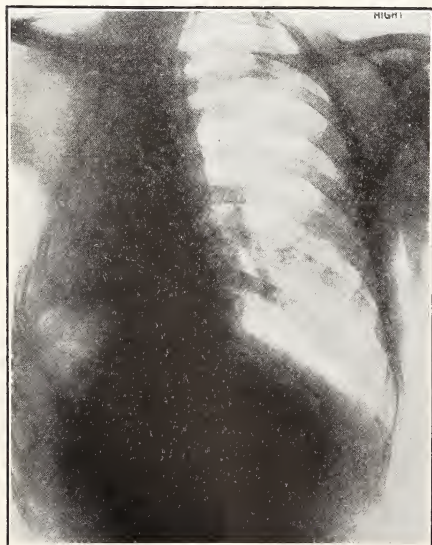
was considered radical treatment in appendicitis, and so has the day passed when surgery is considered radical treatment in pulmonary tuberculosis. The surgical treatment of pulmonary tuberculosis is the greatest advance in the treatment of this disease since the sanatorium or bed rest regime was established almost fifty years ago. It is no longer a question of radical or conservative surgery, but it is a question of rational treatment.

The treatment of tuberculosis is no longer a one-man job, but requires the combined judgment of a well-rounded staff consisting of at least one or two internists, a surgical staff trained in the use of all collapse measures; an eye, ear, nose, and throat man, also a gastroenterologist. Radiological and clinical laboratories are also essential. One sanatorium of 100 bed capacity, of which we have charge, has such a staff, and we carry from 70-80 of all cases under some form of collapse therapy at all times. The only patients in this institution who are not under some form of collapse are the new arrivals or those who are considered entirely hopeless.

There are ten different proven procedures for use in the collapse treatment of pulmonary tuberculosis:



1. Sanatorium regime
2. Bronchoscopy
3. Pneumothorax
4. Oleothorax
5. Phrenic interruption
  - a. Temporary
  - b. Permanent
6. Scalenotomy
7. Internal pneumonolysis
  - a. Open
  - b. Closed—Jacobeus
8. Extrapleural pneumonolysis
9. Multiple intercostal neurectomy
  - a. Permanent
  - b. Temporary
10. Thoracoplasty
  - a. Partial
  - b. Complete



Our collapse program in advanced pulmonary tuberculosis contemplates the use of these different procedures in suitable cases according to the pathology present and the condition of the patient. They are used singly, in combination, and successively. Treatment is started in each individual case with one idea in view—to render the patient sputum and bacilli free by closing the cavity or cavities, if present, and in



any event collapsing the diseased lung. We always give preference to the controllable procedure when they offer a reasonable hope of cure.

#### PNEUMOTHORAX

In unilateral cases, especially if the disease has progressed to the advanced stage or farther, the condition of the patient and the type of lesion present determine which of these procedures are to be used; however our first thought is pneumothorax. Pneumothorax has the advantage that it can be induced gradually, thus avoiding over-tuberculinization, and it can be withdrawn at any time.

#### COMBINED USE OF DIFFERENT PROCEDURES

If pneumothorax is not completely successful within itself on account of pleural adhesions, internal pneumonolysis or a Jacobeus operation can frequently be done and complete the collapse. If the adhesions are too short, thick, or too wide for the Jacobeus operation, and the patient presents the proper indications, an open pneumonolysis may be resorted to, and in this way complete the collapse. If the combined use of these measures fail, a combined phrenic interruption and scaleniotomy may be done; these procedures often prove effective in completing the collapse.

In case all attempts fail with the controllable measures to render the patient sputum and bacilli free, then the pneumothorax should be withdrawn, and an extra-pleural pneumonolysis, intercostal neurectomy, or thoracoplasty should be done.

#### BILATERAL LESIONS

In dealing with bilateral lesions of moderate degree, pneumothorax is still the first thought; and if there are no contra-indications, it is attempted on the worst side first. If successful on this side and if the vital capacity of the patient will permit, pneumothorax is attempted on the contra-lateral side as soon as the first side is stabilized—within 30-60 days. Pneumothorax may be supplemented on either or both sides by other controllable measures if collapse is not effective.

#### PNEUMOTHORAX AND PHRENIC INTERRUPTION IN COMBINATION

In bilateral lesions where a combination of pneumothorax and phrenic interruption is con-

templated, always attempt pneumothorax on the chosen side (usually the worst side) first, so that in the event pneumothorax is impossible on the chosen side, these procedures can be reversed and often made effective.

#### PHRENIC INTERRUPTION

By phrenic interruption we mean the temporary procedure or the crushing of the phrenic nerve done by the method of Goetz. We never do an exeresis of the phrenic nerve. Phrenic interruption has a rather broad field of usefulness as an individual procedure; when used alone it is often effective in closing small, or even larger thin-walled cavities very promptly, and when used in conjunction with scaleniotomy, even more extensive apical lesions are healed readily. Its further usefulness comes from the fact that it can be instituted where pneumothorax is prevented by adhesive pleuritis. Phrenic interruption should always be done following the withdrawal of a completed pneumothorax, in order to reduce the size of a hemithorax and continue a degree of rest for 6-8 months.

#### OLEOTHORAX

Oleothorax has one specific use as a collapse measure; it is used in cases where successful pneumothorax is being lost by adhesive pleuritis. If instituted before pneumothorax is lost, it will by its greater specific gravity increase the collapse which may be held with occasional re-fill for at least one year or long enough for healing of cavities to take place and in this way prevent the pulling open of partially healed lesions.

#### BRONCHOSCOPY

Bronchoscopy is indicated in the occasional case of marked atelectasis as a therapeutic agent, but more often as a diagnostic measure where tracheo-bronchial tuberculosis is suspected, before resorting to thoracoplasty. Tracheo-bronchial tuberculosis is always a fatal disease, therefore is not suited for collapse measures.

#### INTERCOSTAL NEURECTOMY

Intercostal neurectomy is a useful procedure, but has a very limited scope. Its field of usefulness is largely in the very sick patient with unilateral disease who needs a thoracoplasty, but is unable to stand this major procedure. All



intercostal nerves from the 2nd to the 9th are cut outside of the posterior angle of ribs; in this way immobilization of the chest is obtained without shock and without adding any additional burden to the heart. In order to increase rest to the diseased side, a phrenic interruption and scalenotomy may be done before or at a later date to supplement the neurectomy. If these procedures are successful in improving the condition of the patient sufficiently, a thoracoplasty may ultimately be done collapsing completely the hemithorax with greater prospect of cure.

#### EXTRAPLEURAL PNEUMONOLYSIS

The materials used in this procedure are muscle, fat, gauze, and paraffin wax. Our experience with this procedure has been limited to the use of wax. Extrapleural pneumonolysis, while not as popular nor as effective as thoracoplasty, has its place particularly in the very sick patients who have not yielded to the controllable procedures. In this type of case, it is indicated (1) in a single, small, type three, apical cavity with a good contralateral lung; (2) with involved contra-lateral lung, or bilateral, apical cavities; (3) it may be used in combination with thoracoplasty; thoracoplasty being done on the worst side and a wax filling used on the less involved side.

#### THORACOPLASTY

The need for thoracoplasty is positive evidence of mistakes of the past. Thoracoplasty the most effective and most widely used major procedure of this group, and is divided into partial, complete, and partial bilateral. It is the operation of choice where the less drastic procedures have proven ineffective and where Penner's type three cavities exists. Many patients are now being cured by the partial procedure in unilateral apical lesions.

Bilaterally its use is limited to lesions that can be closed by removal of not more than the upper ribs on both sides. The complete thoracoplasty is resorted to when one whole lung is irreparably involved.

Thoracoplasty was first used by "de Cernville" of Switzerland in 1885. It appears that his one operation was a limited one but was reported. Brauer and Fredericks of Germany next reported their work in 1909. The first thoraco-

plasty was performed in this country by Robert LaConte of Philadelphia in 1911. Most of the original work and writing was done by the German authors. Brauer and Fredericks, Sauerbrook, Wilms, and others contributed largely to this subject. It remained for the American surgeons to develop the procedure to its present state, making it more effective with a reasonable mortality, and at the same time extending its scope to include a more varied class of patient. Most of this work has been done during the past ten years. Alexander reported a collected series of more than 1100 cases in his book in 1925. Even at that time the death rate was high, and perfect results were infrequent.

The German conception of this operation was a massive collapse of one hemithorax executed at one operation. The attending 50 per cent mortality was prohibitive even though some of the surviving patients were cured. Notwithstanding this high mortality, the idea was not abandoned, but a rapid succession of changes ensued with two ideas in mind; (1) reduction of mortality; and (2) making the operation more effective. Instead of a 50 per cent mortality with a few cases cured, the procedure has been so perfected that today in the best clinics of the United States, it carries as high as 85 cures and a mortality no greater than other major surgical procedures. These are the figures of John Alexander of Ann Arbor, Michigan, and are soon to be published in his book. As late as three years ago, these figures were not considered possible. The effective changes and modifications of the original operation, which have brought about these results are too numerous to mention here, but a few of the most important steps will be enumerated with a short description. As we look in retrospect on the criteria of scarcely three years ago, the improvements of today are truly dramatic.

(1) The operation as originally planned was from below up; that is commencing at the 11th rib and removing short sections of all ribs including the first at one operation. The location and extent of the pathology was disregarded. The operation is now done from above downward and is adapted to the pathology present.

(2) The present incision, brought out by

Alexander, starts at the top, as did the paravertebral incision, but swings around the scapula to the posterior-axillary line or farther in heavy persons. The scapula can be then raised up by cutting the upper digitations of the serratus-magnus muscle and exposing all the ribs from the 1st to 7th. This type of incision permits removal of long sections of ribs, thus making the operation effective in a large percentage of cases including those with giant cavities.

(3) The number of stages was increased to two and later the multiple stage procedure of Hedblom was adopted.

(4) More wisdom in the selection of cases added greatly to the reduction of mortality and is still one of the intriguing problems that has not been entirely solved. It has been proven, however, that patients with productive lesions lend themselves best, and that acute, widespread, exudative lesions are a specific contraindication to thoracoplasty. It has also been learned that no patient should be operated upon until there is evidence that definite resistance to the infection is present.

(5) The operation is adapted to the pathology in each individual case; that is in apical lesions a partial thoracoplasty is done, collapsing only the apex of the lung, conserving all good lung possible. This, only a short time ago, would have been considered the rankest heresy.

(6) Removal of all of the 1st rib including its costal cartilage, all of the 2nd and 3rd ribs including the transverse processes, the costal cartilages, and a portion of the sternum, if necessary. This step made it possible to close the largest apical cavities which by the older method could not have been closed. These ribs are removed by the technique of Alexander and is essentially as follows: Through the posterior incision all of the 1st rib and long sections of 2nd and 3rd ribs with their transverse processes are removed. Later after the chest wall has stabilized (2 weeks or better still after the 2nd stage in the back) an anteriolateral operation is done, removing the remaining portions of the 2nd and 3rd ribs with their costal cartilages, and in this way the mortality is kept low without interference with the effectiveness of the procedure.

(7) The painting of the periosteal surfaces with 10 per cent formalin to retard the regeneration of bone in another decided advance. More time between stages of operation is thus possible. This has been no small factor in reducing the mortality. Formerly without the use of formalin on the periosteal surfaces, it was necessary to do the succeeding stages in rapid succession, concluding the whole series in 3-4 weeks.

If the whole series was not completed before regeneration of bone, the best collapse was not obtained. With the use of formalin, thirty, sixty, or even ninety days delay is permissible, and in many cases advisable. This procedure undoubtedly has an important secondary advantage in preventing infection. Since beginning its use, we have had no infection in fifty operations.

(8) Reduction of operating time which is obviously important has been greatly reduced; limited operation and team work are the two factors.

(9) In partial thoracoplasty where it is necessary to remove sections of only five or six ribs, resection of a portion of the scapula to make it fit snugly on the decostalized pleura has been found a splendid movement. The seating of the scapula in this manner helps collapse, also limits paradoxical respiration, and prevents painful friction between its lower angle and 6th and 7th ribs.

(10) Pre-operative treatment as regards emptying of cavities and bronchi of sputum before anesthesia has proven of great value in preventing bronchogenic spread.

Gas anesthesia is always used.

(11) Post-operative treatment, which is most important, has lost many of its horrors since the modern operation has been adopted. Blood transfusions and oxygen tents are seldom needed. Morphine without atropine is administered freely. It is important to have the patient cough at regular intervals for the first 48 hours and raise the same amount of sputum daily as before operation. 5 per cent saline solution 300-500 c. c.'s intravenously followed by 2-3000 c. c.'s normal saline or Hartman's solution has been found to lessen nausea and vomiting. Since we have used these solutions as described, and dis-

continued the use of glucose, we have had no serious case of ileus, and the convalescence is usually comfortable and uneventful.

#### DISCUSSION

Dr. Alton Ochsner (New Orleans): I think we are especially fortunate to have a man who knows as much about tuberculosis as Dr. Thomas speak to us.

The surgical treatment of pulmonary tuberculosis is not new, but fortunately the advantages to be derived from this method of therapy are not generally appreciated.

Dr. Thomas, of course, did not mean to leave the impression that the surgical therapy of tuberculosis is the only type of therapy. It is in reality an adjunct in the treatment of tuberculosis. As in tuberculous lesions elsewhere in the body, rest and immobilization are of importance. There is probably no portion of the body which is more active than is the lung, unless it might be the heart, and when one imagines the work which the lung does each day, the advisability of rest for this constantly mobile structure can be easily understood.

I think that Dr. Thomas's statement that the indication for thoracoplasty means a failure on the part of someone is certainly true. Whereas thoracoplasty does do a great deal of good in many cases, the procedure is indicated in the advanced case, and we must remember that whenever a thoracoplasty is done it is a destructive operation and that from that time on that portion of lung is non-functioning.

Dr. Thomas's plea for temporary interruption of the phrenic nerve is certainly a good one. This means, of course, that these cases must be seen early. A number of years ago Yates advocated crushing the phrenic nerve in early tuberculosis, but was severely criticized as operating unnecessarily in cases of tuberculosis. Dr. Thomas today tells us that the temporary interruption of the phrenic nerve is an operation of choice, which it is, in early cases in which we can expect the cure of the tuberculosis process and the return of the function of the diaphragm.

As regards collapse therapy with pneumothorax, I believe we are beginning to realize the importance of maintaining the collapse for long periods of time, not six months or a year but two and three years, because only in this way can we cure these individuals.

I am heartily in favor of the multiple stages in thoracoplasty, which Dr. Thomas has referred to and which he has given Hedblom credit for. I had the advantage of working in German clinics where thoracoplasties were done in single stages and realized what a severe trauma it was. After

returning home it was my ambition to be able to do a thoracoplasty in the single stage. After observing a number of these cases I finally had such a patient, a strapping young man in perfect condition who had a marked fibroid type of phthisis of one lung. I felt it was the kind of case in which a one-stage thoracoplasty could be done. We did it, and almost lost him as the result of the operation. I agree with Dr. Thomas that it is far better to do too little in individual stages than to do too much. The largest number of stages I have used on a particular case was eight, which means the resection of only one or two ribs at a time. It is remarkable how much these patients can stand if one is cautious in the indications and if one does not do too much.

I am sure we have all learned a great deal from Dr. Thomas's paper this morning. When he spoke about the care in the sanatorium, I probably realized more than any of you what this means in his institution. I had the opportunity of visiting his institution and I realize how the patients are treated. His patients are treated as in other sanatoria, but he has that happy faculty of seeing the patient as a whole and uses the various types of therapy; i.e., conservative or sanatorium and collapse therapy.

Our reason for not using glucose in ileus or in cases postoperatively is based upon some experimental work we did in the experimental surgical laboratory at Tulane a number of years ago. Ajax Carlson of the University of Chicago, in trying to attempt to explain hunger pain, had shown that the administration of glucose to humans and animals produced a decrease in the activity of the stomach and that the administration of insulin increased the gastric tonus and peristalsis. We felt that if such occurred in the normal stomach of the human and animals that it certainly would be of importance to the surgeon to know whether glucose exerted an inhibiting action on the gut, especially postoperatively.

We performed a large number of experiments on animals some of which were normal but most of which had ileus and found that a solution of dextrose of ten per cent or greater concentration invariably inhibited gut activity. The inhibition could be prevented if the dextrose was combined with insulin. If concentration of insulin of five per cent were used, this effect was not observed.

We also observed that concentrations of saline solution, five per cent or greater, exerted a very stimulating effect on the gut activity. The original observations concerning the stimulating effect of hypertonic salt solution on gut activity were made by Hughson and Scarff of John Hopkins. We feel one of the most valuable drugs or substances in the treatment of these cases is a salt solution, preferably containing calcium and



potassium. Hartmann's and Ringer's solutions are, of course, isotonic. We use it twenty times normal, Hartmann's or Ringer's solution, and give 10 to 15 cc. intravenously.

Dr. J. E. Heard (Shreveport): Dr. Thomas covered the field for us nicely in the time that he had. It certainly is refreshing to listen to one who is so enthusiastic over this work. I know he is doing beautiful work.

There are two of these surgical procedures that I wish to say a little bit about. One is the phrenic nerve interruption, the other thoracoplasty.

In the last three or four years that I have been interested in this type of work, in working with Dr. Charles R. Gowen and Dr. Gilmer, I have now had the opportunity to do a little more than a hundred thoracoplasties.

As to the phrenic nerves, we do them under local, of course, using Lillenthal's approach through the subclavian triangle. We used to twist them out, using the so-called exeresis. We did not like that, and it has been a long time since we have done it. In spite of the fact that we are told there are many accessory phrenics, so far we have not failed in crushing the nerve. I do not believe we are quite as enthusiastic about the interruption of the phrenic nerve as we used to be, but it still has its place, and it is certainly a very useful procedure. In these cavities where we do thoracoplasty, we rarely now interrupt the phrenic nerve. We have had no complications, no trouble from this procedure. I think the thoracoplasty of all the surgical procedures has by far the most value, and it without doubt produces the best results, but you cannot always tell at first where you will wind up when you start out with one of these. The object, of course, is to collapse the cavity and to conserve as much of the healthy lung as possible, and it may require several operations before you get through, and finally you may have to play your last trump.

We use ethylene gas, and it works very nicely, and we have had no trouble. Most of our cases, of course, are apical cavities, small or moderately sized, and we do the partial, thoracoplasty taking anywhere from four to five ribs, often five ribs with no trouble. The lower ribs are done first. We save the first rib for the last. And I have a healthy respect for this, gentleman, because this procedure carries a certain amount of danger. We had two accidents a while ago, not having the proper tools, damaging the large sub-clavian vein. I have a wholesome respect for cutting this first rib right underneath, being the vein. You have to push the sub-clavian vein right off the rib before resecting. We have not had any trouble, with care. There were four deaths in this series. Two of them were from accidents, tearing the sub-clavian vein, another was a patient

around sixty or a little more who was not in good condition and should not have had this operation done, but he begged so hard for something that we finally gave in and did a couple of stages on him, and at the last he played out. The fourth was a kinked bronchus.

We are very enthusiastic about thoracoplasty, and believe without any doubt that it is certainly working out beautifully. We usually get results with an apical, taking several ribs,  $\frac{3}{4}$  of the first,  $\frac{1}{4}$  of the second,  $\frac{1}{2}$  the third and  $\frac{1}{2}$  of the fourth. I do not like to do a complete removal of all of these ribs, because the deformity is so noticeable, and it is not so bad if you do not remove the entire rib. It is important to remove the end of the rib, and sometimes do a transverse process of the ribs below the second. Of course the apex drops down below the first and second ribs, and we do not have to worry about that.

As regards the extrapleural collapse of these cavities, I must say so far we cannot be very enthusiastic about it. Even now, though the technic has been wonderfully developed, there are many bad complications still arising, such as the foreign body sloughing into the cavity, etc.

Following Dr. Ochsner's technic, we have been very well satisfied with using the pectoral muscles to press into the pleural cavity.

Our method has worked very nicely. So far, we have been very successful with the cases we have had. However, we have not had a large series of this type, because the partial apical thoracoplasty will usually give us what we want.

Dr. Charles R. Gowen (Shreveport): This question of collapse therapy comes right down to the principle of all pathological conditions, rest. For a good many years there have been schools of thermotherapy, various serums and vaccines, and it is just as impossible to heal lung tissue in motion as lung tissue where there is a definite break in the continuity of tissue and a separation of cells, with a vaccine, although you might kill out the tubercle bacilli in the area. Your lung is open to the outside air, whatever mixed infection might come along, and your tuberculosis or erosion, or destruction of tissue or consumption is going to go merrily on. There is only one factor in the treatment of tuberculosis that has held good and is constant in a healed tubercle, and that is rest. You talk about sunshine and other factors, and you can eliminate any of them, except in the ordinary methods of living, and rest is the only one that will hold constantly. You cannot have the healing without rest. There is no contracting tissue in the lung to bring the cavities together. We see a few that might close. They close through the shifting of the mediastinum, or a pulling down of the ribs and sometimes the diaphragm from adhesions, or one cause or another;



the cavity might accidentally close. There is no method that will definitely cover all of these cases.

Dr. Thomas mentioned that the team work in chest surgery is most important. There are very few men who can cover all the field. I do not know of many surgeons who are physiologists, and I do not know of many physiologists who are surgeons. The physiologist has to have somebody to work with, select his case, and, as the doctor mentioned, never go into a massive allergic lung. With any allergic tissue or cell, if you add pressure to it you will immediately get a necrosis or destruction. You destroy the thing. Do not touch the lung until there has been a definite walling off, until there is a definite indication that the patient is able to check the disease. Then apply your collapse, with the exception possibly of a partial pneumothorax. You can occasionally use air in a very "hot" lung, as we term it, and not cause too much trouble. There is one that the clinician himself has to handle.

Tuberculosis is developing as a surgical disease. Tuberculosis at the present time is an absolutely controllable disease, and preventable. The case that cannot be closed by some surgical means can be definitely isolated. So it is not a matter of controlling tuberculosis, that you do not know how, but it is a matter of the proper education, first, not of the people themselves but of the doctors. We are the people responsible for that. There is not a man or woman or girl or boy who has tuberculosis that does not want to get well. It is a matter of the doctor, the family physician, not being sufficiently interested in it to try to help him to get well. That is an accusation that is very definite, because I come in contact with them every day. The doctor makes a diagnosis of tuberculosis. He is afraid to tell the patient. The patient goes on until, as Dr. Thomas says, we have to acknowledge that everything else has failed and have to do a de-ribbing operation. If that case had been properly diagnosed early, with the proper clinical procedures, I think in a large percentage of cases he might have got well. I disagree with Dr. Thomas. If the idea had begun with tuberculosis, they would have got well without any surgical collapse. A large number will get well with it. With the limited number of people able to give pneumothorax, it is hard for people to get it. The idea is to teach medical students to give it. That is not being done with many of the medical students today. We have men coming to New Orleans who say, "I have seen a few cases of pneumothorax, but I do not know how to give it." They are going to communities where tuberculosis is prevalent, and they are going to have to send their patients away, and the patient may not be able to remain there long

enough to be cured, so that tuberculosis is not an economical disease. A great many factors have to be considered, if we expect to stamp it out. We have to devise some method where all patients may receive this treatment. The proposition as to how many ribs to remove, and so forth, or what procedure to use, is always a question of the individual case.

There are three slides that I should like to show, on a case we have just recently operated, showing the size of cavities that can be collopsed with one operation.

This is a case of a young woman about twenty-seven years old that had had an acute tuberculosis, and was diagnosed as pneumonia. She thought she was well over it, but failed to improve. She began to get up, and noticed that she was coughing and expectorating a great deal. She held her weight well. She came to the sanatorium about two and a half months ago, and here is a good sized cavity. The rest of the lung is practically clear, and she was in splendid physical shape otherwise.

I tried a pneumothorax. Here is a very thin wall. I was very much afraid to use any more pressure. The sputum lessened considerably, the temperature dropped, and everything was going along very nicely, but due to the fact that she was in such splendid condition in the rest of the lung we did not do any more pneumothorax, and we took out five ribs. Dr. Thomas said in a great many cases (and I agree) it is dangerous to take out more than three or four, but in this case, where she was in good condition, I felt we were safe in trying to close this cavity on one operation.

This was taken about eight days after the first operation. Your cavity is here, in eight days. We feel that with this rib here, and nothing to hold it, that will close it.

This patient had been running a temperature of 100 or a little more, and she has not had any temperature since this operation. After having that temperature, in less than two weeks we were unable to find tubercle bacilli. That shows that if the individual is not overcome by the first of the attack of tuberculosis, and it is localized, if you rest the lung the nature of the disease is to heal. It cannot keep from healing.

This individual has at no time been sick since this operation. She has shown recovery, and I think one more rib will allow the whole thing to close, and she will have a third to a half of very good lung tissue.

It was certainly a joy to listen to Dr. Thomas and Dr. Ochsner and Dr. Heard on this subject, and I should like to repeat that the control of tuberculosis is not in the hands of the chest

surgeon or the physiologist, but in the hands of the general practitioner, to find the cases early and apply the rest of the body and mind, if not some physical form of rest, pneumothorax, phrenic interruption, thoracoplasty, and we will not spread tuberculosis if we control those factors.

Dr. H. L. Kearney (New Orleans): I should like to ask Dr. Thomas in closing to tell us about the problem of collapsing the lung by artificial pneumothorax in cases where there are pleural adhesions, whether he uses any special means of getting rid of the adhesions or whether he changes to some other form of therapy.

Dr. P. R. Gilmer (Shreveport): I want to take a couple of minutes to think Dr. Thomas for his splendid presentation on the subject which he admits himself could well be worked into a monograph, any particular phase he undertook.

Last year at the meeting in Shreveport I undertook a somewhat similar paper, and I know what difficulties are met and how extremely trying it is to present a paper on compression therapy in pulmonary tuberculosis. It is a terrible undertaking, because if you leave out one or two procedures somebody will say, "Don't you employ this or that or the other?" and you must try to hit them all and give as much attention as you possibly can to it.

I agree with Dr. Thomas on his recommendations of compression therapy or surgical treatment, almost at the outset. In our institution, the only way we vary that is that our minimal cases are placed under observation for perhaps a month or two, that is, patients without sputum. If there are minimal cases with positive sputum, we give them a pneumothorax immediately. We do not wait for that lesion to clear up per se. We go on and help them. Those are cases of tuberculosis that are minimal, who have infiltrations and show no tendency toward resolution, after bed rest and sanatorium routine, and we give them some form of pneumo therapy.

Dr. Thomas has discouraged me a little with his mortality statistics, and I do not believe that ours are the same as those that he has quoted. He said 23 per cent of the minimal cases at the end of five years are dead, and I do not believe we lose that many minimal patients in that time. I have been in this about twelve years, and I know that numbers of them that were minimal have become arrested or cured over a period of five or six years. Dr. Thomas may have better records than I have, but that seems a little bit high. Also his moderately advanced case figures are a little higher than ours, and also his far advanced group. I am not saying that in criticism or indicating that we are a lot better in our section of the country, but I do not believe that we are losing that many patients along that line.

Dr. Thomas brought out a strict hospital regime and said smoking is prohibited in his hospital. The way he talked to us, I believe he means what he says, and I believe they do not smoke. I have struggled with that for years, and several times I thought I had it controlled, but I always found out later on they were able to do it nicely without my knowing anything about it. We finally assigned a room for that purpose and let them go in there and smoke. I asked Dr. Larson Brown about it, and he said except in acute cases, acutely ill, they did not try to stop smoking.

With regard to phrenic paralysis, we have this controlled. There has been some work done with that where the cases later resulted in death, and the extreme atrophy of the diaphragm, after years of being deprived of the nerve supply, set me to thinking that perhaps it was not so advisable to interrupt that nerve permanently, so we are contenting ourselves with the crushing, feeling that we are going to get all that we want out of our crushing operations.

It has certainly been a pleasure to hear Dr. Thomas, and it almost makes me a little jealous to have somebody else talk on this subject, because I am very much interested in it and have had the fortune to have some experience with it. I certainly did enjoy it.

Dr. C. A. Thomas (Tucson, Arizona): I have one or two slides I want to show, but before I show these I want to speak of Dr. Gilmer's minimal cases. Why do we advocate the collapse in minimal cases? Simply because we have too often seen them lie in bed on our regime of rest and have a bronchogenic spread to the other side. We feel the patient is safer, gets well far more quickly, and has less spread, if we use collapse therapy early. It is our custom when a patient comes in to have him completely examined by all of the staff, and at the first weekly conference we decide what we will do. Thirty, sixty, ninety days in bed to see what will happen? No, he gets something within a week or two weeks, if there is no particular contra-indication. All of these things are not as simple as you might judge from the way these doctors here and I have talked. They all have to be carefully studied and the method of collapse chosen, but if there is no contra-indication, our patients get some form of collapse inside of thirty days, or as soon as we can get around to them.

These are not my statistics, but the National Tuberculosis Association's statistics. They are not built on our work but on work of a far broader scope, and if they are incorrect, it is not my fault, but I feel sure they are right.

I should like to say to the doctor who still removes four or five ribs at a time, that the facts are that he will get into trouble. I have been in

trouble up to my ears and over. I never take more than three ribs at any one operation and much prefer to take out only two. In doing a thoracoplasty we always commence at the top, and use the incision of Alexander, but we do not take the first rib first. If we plan to take three ribs, we take the third rib first, follow with the second, and then the first rib lies open before us. This incision is a beautiful thing. You lift the scapula and you can see the whole back from the seventh rib up to the first, but the first is over the hill, and if you undertake to remove it first, you have a lot of trouble, and it is not necessary. Commence with the third rib, take out the third, and then the second, and your first is there before you.

We do not use ethylene in Tucson simply because our climate won't stand it. When we can walk into the operating room and put a hand on the table or on the gas machine and get a static spark, we feel that ethylene probably is not safe, so we use in this work nitrous oxide oxygen.

Relative to the temporary phrenic interruption, we sometimes repeat this operation three or four times. It will last from four to six or eight or nine months, and some of them will go a year.

As I mentioned a while ago, if you crush the nerve over too wide an area, function is slow in returning. We use almost a mosquito forcep, and they sometimes repair in four to six months. We repeat it when indicated, as it is easy. We do this operation by the method of Goetz.

We do the permanent phrenic interruption only in the case that has had a pneumothorax and who cannot continue his hospital regime longer and he is not quite well. We take a chance and do a permanent operation in these cases, feeling that the patient is better off.

We do not do an exeresis but we cut out a section of the main stem in addition to sections of the accessories, and it gives us just as good results. We quit the exeresis several years ago, and I have never had a pain in my stomach since, when I do a phrenic interruption, but when I pulled those nerves out I always got a pain.

In regard to the combination of procedures, if a pneumothorax is not successful, we add something to it, maybe a phrenic interruption will be successful, but if it is due to adhesions, we use a Jacobus operation, and always cut them close to the chest wall, never close to the lung. If you cut one close to the lung, or even perchance at the chest wall and you cut through a string of pulmonary tissue, you immediately get a spontaneous pneumothorax and most likely a tuberculous empyema.

(Slide) I want to show you what type of cavities you can collapse. We use the classification of

Pinner in our work. In other words, this would be a Type 3 cavity, enormous, huge. Of course the thick wall would cause us to classify that as a Type 3.

(Slide) This is a patient after the operations have been completed. There were from four to six ounces of heavily laden sputum a day, and now the patient has no sputum, no tubercle bacilli, and the patient is at work after two years. With that enormous cavity, unless you cut the transverse processes off at the body of vertebrae, you will have a shoving over of this cavity into the vertebral gutter, and it will not close. Instead of having a huge cavity like this, you will have a slit-like cavity, hidden under the transverse processes, and your patient is but little better off.

The doctor mentioned instruments. If you are going to do thoracoplasty, you can only do it satisfactorily by having the proper instruments. They are very expensive, of course, but it saves time in operation and you can do it much more effectively.

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## TOTAL THYROIDECTOMY FOR CARDIAC DISEASE\*

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and

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Recently total ablation of the thyroid gland for heart disease has attracted the attention of both internists and surgeons, but the results, so far, are conflicting and the method is still so beset with difficulties that it cannot yet be considered more than in the experimental stage. That patients with cardiac failure may derive great benefit from total extirpation of a normal thyroid gland is evidenced by most of the reports in the literature. The results obtained by total thyroidectomy in the treatment of heart failure, both the congestive and anginal forms, appear to justify further trial. The value of the therapy cannot be properly estimated, however, until more time has elapsed, because in addition to the survival of the patient, the permanence of the relief, and their ability to resume fairly normal activity are factors to be considered. In patients with cardiac failure

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who are incapacitated and usually bed-ridden any therapeutic procedure, although apparently drastic, which will permit a resumption of activities, even though partial, may be justified. Total ablation of the thyroid in severe cardiac disease is obviously not a curative therapy but only one of palliation because the underlying cardiac lesion is not corrected.

According to Pratt<sup>1</sup>, the Chinese, one thousand years before Christ, successfully treated cardiac disease with sponge ash, which is high in iodine content. The earliest accurate descriptions of thyrotoxicosis were by Caleb Fillier Parry<sup>2</sup> in 1786. He observed the association of congestive heart failure in patients with classical symptoms of exophthalmic goiter, whereas, in others, angina pectoris appeared months before enlargement of the thyroid gland was apparent. Parry<sup>2</sup> also observed that congestive cardiac failure subsided with a decrease in the size of the gland. In 1902, A. Kocher<sup>3</sup> reported the disappearance of signs of cardiac insufficiency in patients in whom his father had performed subtotal thyroidectomies. Hamilton<sup>4</sup> observed that in many patients with hyperthyroidism and congestive heart failure subtotal thyroidectomy exerted a beneficial effect on the cardiac insufficiency. In 1926, he and Lahey<sup>5</sup> stated that prolonged thyroid intoxication produced auricular fibrillation and true heart disease and that subtotal thyroidectomy in such cases relieved the "failing heart of the burden that is making it fail and results in nearly all cases in complete relief of a complete disability".

Whereas the relationship between hyperactivity of the thyroid gland and cardiac disease has been appreciated for some time it is only recently that this relationship between normal thyroids and cardiac insufficiency has been suggested. Christian<sup>6</sup> was one of the first to observe the reciprocal relationship between thyroid activity and cardiac failure and showed that patients with cardiac insufficiency were relieved when myxedematous. In 1925, he (7) stated "it is true that with an existing cardiac lesion, which may be either coincidental or caused by thyroid hypofunction, the decreased activity of so many body functions, as happens in myxedema, serves as a conservative force so

far as the circulation is concerned. To put it another way, the damaged heart . . . has less work to do so long as the thyroid activity is considerably below a normal level. A lowered metabolic activity from thyroid deficiency may be a conservative process, a form of cardiac rest, that is advantageous to the heart". Christian<sup>8</sup>, in 1928, suggested that were it not for the undesirable effects of myxedema this might be produced in patients with angina pectoris.

Blumgart and Weiss<sup>9</sup>, in 1927, showed that normally the pulmonary blood velocity is directly determined by the metabolic demands of the body. Blumgart et al<sup>10</sup> found that when the basal metabolic rate was increased (as in hyperthyroidism) the blood flow velocity was proportionately increased, whereas in the presence of a decreased basal metabolic rate (myxedema) the blood velocity was decreased<sup>11</sup>. They (<sup>22</sup>, <sup>13</sup>, <sup>14</sup>, <sup>15</sup>, and <sup>16</sup>) found in observations on patients with cardiac disease that when cardiac compensation was present the basal metabolic rates and blood flow velocities were both within normal limits. In patients with congestive heart failure, however, the blood flow velocity was considerably decreased even though the basal metabolic rate was normal. They further found that the symptoms and signs of cardiac insufficiency were proportionate to the degree of the slowing of the blood flow. These findings in congestive heart failure suggested the advisability of removal of a normal thyroid gland in such patients.

During cardiac insufficiency the heart is unable to meet the metabolic demands. Obviously heart failure is especially apt to occur if the metabolism is increased as in hyperthyroidism but may occur in patients with normal metabolism. It is reasonable that a heart which may not be capable of delivering sufficient blood to meet the normal metabolic demands may be able to supply enough blood if the normal demands were decreased. As shown by Blumgart and his associates<sup>17</sup>, the blood flow velocity is markedly decreased in cardiac insufficiency even though the basal metabolic rate is normal and also in patients with hypothyroidism in whom there are no signs of cardiac failure but in whom the basal metabolic rate is decreased. It is reasonable to assume that the



heart which is unable to supply the normal demands for oxygen might be capable of supplying sufficient oxygen if the demands were less than normal. Normally, because of a definite cardiac reserve, increased demands can be made upon the heart without insufficiency; in cases, however, with heart disease, because the myocardium is unable to supply even the normal demands without symptoms, the patient can be relieved only by decreasing the demands. This can be accomplished by decreasing the normal metabolism and thereby diminishing the oxygen need. Total removal of the thyroid very effectively decreases the basal metabolic rate as well as the oxygen need.

The relief of symptoms in angina pectoris by total ablation of the thyroid may be due to a number of factors. The decreased demand on the heart as the result of lowering the basal metabolic rate should exert a beneficial effect on the angina because it is well known that exertion is apt to precipitate an attack. Blumgart and Berlin<sup>18</sup> believe that the immediate relief is due to interruption of the sensory fibers. In many cases the relief of symptoms in angina pectoris is due to a decreased sensitivity to adrenalin. Levine and his associates<sup>19, 20</sup> showed that in cases with angina an increased sensitivity to adrenalin existed, as anginal attacks could be precipitated by the subcutaneous injection of adrenalin. Following total ablation of the thyroid, however, the adrenalin sensitivity disappeared. Cutler and Schnitker<sup>21</sup> found that following total ablation of the thyroid for angina pectoris dilatation of the peripheral vessels could be produced more readily than preoperatively, which they believed was due to "diminished vasomotor tone". Shambaugh<sup>22</sup> produced angina pectoris experimentally in dogs by occluding the coronary vessels. He found that if the coronaries were only partially occluded without the production of angina, anginal attacks could be precipitated by adrenalin injections. Thyroidectomy by decreasing or abolishing adrenalin sensitivity may prevent anginal attacks, especially in those in which vasomotor spasm of the coronary arteries is a factor.

The excellent results obtained by subtotal thyroidectomy in patients with thyroid disease

has already been alluded to and is substantiated by the statistics of Lahey<sup>23</sup>, and Pemberton and Willius<sup>24</sup>. Rosenblum and Levine<sup>25</sup> believe that "many patients with moderate or advanced heart failure, or angina pectoris, who have been refractory to all the ordinary therapeutic procedures have regained compensation and have been restored to normal or fairly normal activities following a subtotal thyroidectomy". The advantage of the removal of a normal thyroid was suggested by a case operated upon in 1927 and reported by Rosenblum and Levine<sup>25</sup> in 1933. A subtotal thyroidectomy was performed for a suspected "masked hyperthyroidism". The gland was found to be normal histologically but the patient's condition improved for a number of years. There was, however, a recurrence of symptoms and the patient succumbed four and one-half years after operation. Blumgart et al<sup>26</sup> were unable to obtain relief in congestive heart failure by subtotal thyroidectomy because although a decreased basal metabolic rate and clinical improvement occurred immediately postoperatively, as soon as the basal metabolic rate returned to normal the symptoms recurred. Friedman and Blumgart<sup>27</sup>, because subtotal thyroidectomy does not cause permanent lowering of the basal metabolic rate, unequivocally state: "At the present time, nothing but complete removal of every vestige of visible thyroid tissue by surgical means will guarantee the desired persistent lowering of the metabolic rate and the consequent clinical improvement".

The first total extirpation of a normal thyroid for heart disease was performed by Eliott Cutler<sup>21</sup> at the Peter Bent Brigham Hospital on December 14, 1932. The following day (December 15) Berlin<sup>28</sup> performed a similar operation. Since this time this procedure has been performed many times by different investigators. In 1934, Mixer, Blumgart and Berlin<sup>29</sup> reported to the American Surgical Association 75 cases of total thyroidectomy for angina pectoris and congestive heart failure and at the same meeting, Cutler and Schnitker<sup>21</sup> reported they had performed the operation 53 times, 29 of which were done for angina pectoris. The operation has been done many times in other clinics but the number operated upon

in individual clinics has not been as large as in the Boston series.

The selection of patients for any procedure, especially one as drastic as total ablation of the thyroid, should be extremely carefully done, and it will probably require observation of patients over many years before definite criteria as regards selection can be laid down. As the good results obtained by total ablation of the thyroid are largely dependent upon the decrease in the metabolism and concomitant decrease in demands upon the heart, it is quite obvious that the procedure is of little or no value in individuals with low basal metabolic rates. Mixer, Blumgart, and Berlin<sup>29</sup> state that they hesitate to operate upon patients with any type of cardiac disease in whom the preoperative basal metabolic rate is below 15 per cent and refuse operation in cases in which the basal metabolic rate is 20 per cent or lower. These same observers believe that patients with congestive heart failure, which is rapidly progressive in spite of conservative measures, are little benefited by the procedure, as are those cases of angina pectoris in which there has been rapid progression of the condition. It is obvious that the procedure should not be used for those cases which can be relieved of their symptoms by limitation of their activity. Wolferth<sup>30</sup> believes the ideal patient for total thyroidectomy is one whose cardiac condition is stationary or only slowly progressive. It has been the rule in the selection of our cases to limit this operation to only those cases which have been carefully studied by internists and in which all the conservative, usually employed medical measures had failed. From our own experience we are convinced that the operation is not justified in the cardiac patient whose reserve is so depleted that no improvement can be expected even though the demands upon the heart are decreased. Undoubtedly until recently the procedure had been used inadvisedly because in most instances too far advanced cases have been selected. Mixer, Blumgart, and Berlin<sup>29</sup>, and Cutler and Schnitker<sup>21</sup> have obtained the best results in angina pectoris. This also agrees with our findings. As the good results obtained in angina may be due to desensitization of the patient to adrenalin, as suggested by the

investigations of Levine and his associates<sup>19</sup> <sup>20</sup>, it is desirable in patients with angina to determine whether a sensitivity to adrenalin exists preoperatively and not to perform the operation in those cases in which there is a history of a previous coronary thrombosis. Blumgart and his associates<sup>31</sup> maintain that the operation is justified only after prolonged and adequate medical treatment has failed to relieve the patient. Because the removal of the thyroid does not remove the underlying cardiac lesion, Blumgart and his associates<sup>31</sup> have operated upon very few cases of luetic heart disease and similarly few cases of hypertensive heart disease. Of 75 cases operated upon at the Beth Israel Hospital only 2 were suffering from hypertensive heart disease and only 1 from luetic heart disease. As these authors have emphasized, the underlying cardiac lesion, if progressive, will progress in spite of the thyroid operation.

The contraindications to total ablation of the thyroid are very definite and unless strictly observed, the procedure, which in properly selected cases offers some therapeutic relief, will rapidly fall into disfavor. As mentioned above, Blumgart et al<sup>29</sup>, <sup>31</sup> believe that the following are distinct contraindications to this procedure: (1) the presence of rapidly progressing cardiac failure in patients unrelieved by the ordinary conservative measures; (2) a low preoperative basal metabolic rate (20 per cent or lower); (3) the presence of a recent coronary occlusion; (4) a renal insufficiency; (5) the presence of active rheumatic involvement; and (6) persistence of symptoms in spite of bed rest and other conservative measures. Wolferth<sup>30</sup> emphatically states that the operation is contraindicated in patients who do not respond to medical therapy.

There is probably no operation which requires a more thorough knowledge of the normal anatomy of the particular region than total ablation of the thyroid; and, unless one is thoroughly familiar with the normal anatomy and also well trained in technical surgery, the procedure should not be attempted. As emphasized by Berlin<sup>28</sup>, patients in whom the operation is done are poor risks because of their cardiac insufficiency, but fortunately they do

not have toxic manifestations, thus not increasing the risk. Whereas originally general anesthesia was used, the importance of using local analgesia has recently been emphasized. Mixer et al<sup>20</sup> believe that one of the principal causes for the reduction of the mortality rate in the more recent cases has been the substitution of local for general anesthesia, and the reduction in the amount of preoperative and postoperative sedations, which abolish the cough reflex and increase the incidence of pulmonary complications. This is particularly true in patients with congestive heart failure in whom pulmonary complications are more apt to occur and less so in patients with angina pectoris. Since the introduction of local analgesia, 22 cases have been operated upon at the Beth Israel Hospital<sup>20</sup> with decompensated heart disease without a single death. Cutler and Schnitker<sup>21</sup> used local analgesia in all but one of their cases and have done this primarily because it permits the determination of the function of the recurrent laryngeal nerve during operation. During the operation patients with severe congestive failure are placed in the "head up position"<sup>21</sup> in order to avoid respiratory embarrassment and to tend to collapse the distended veins in the field of operation. A Kocher collar incision is used and, as emphasized by Cutler and Schnitker<sup>21</sup>, it should be made somewhat higher than is usually made for a subtotal thyroidectomy because the removal of the superior pole is thus facilitated. Berlin<sup>28</sup> recommends the transverse division of the infrahyoid group of muscles in order to mobilize the lateral lobes more readily. The entire thyroid gland, including all vestige of the pyramidal lobe, is removed, care being taken not to injure the parathyroid glands or the recurrent laryngeal nerves. Cutler and Schnitker<sup>21</sup> advise removing the right lateral lobe from the right side and the left lateral lobe from the left side, because previous to using this procedure they injured 2 recurrent laryngeal nerves on the left side while working from the right. We believe that this suggestion is worth while because in three of our cases the left recurrent laryngeal nerve was injured while removing the left lateral lobe from the right side. While freeing the gland in its lower portion, especially in the region of

the inferior thyroid artery, care must be taken to visualize the recurrent laryngeal nerve and not to injure it. By having the patient speak frequently one can determine whether injury has occurred or not. Freedman<sup>32</sup> advocates laryngoscopy after the completion of a hemithyroidectomy in order to determine whether the recurrent laryngeal has been injured and if such is the case, the opposite lobe is not removed. The gland should be removed entirely at one time, because unless such is done, there is not sufficient decrease in the basal metabolic rate for improvement to occur.

#### RESULTS

The results obtained in those clinics where a number of cases have been operated upon and in which undoubtedly the indications for operation are fairly definite have been very satisfactory. Mixer, Blumgart, and Berlin<sup>29</sup> in 75 cases of congestive heart failure and angina pectoris obtained the following results: In 23 cases with angina there was complete relief in 35 per cent, moderate improvement in 50 per cent, no improvement in 15 per cent, and there was no operative mortality. In 46 cases with congestive heart failure there was improvement in 55 per cent, moderate improvement in 26 per cent, no improvement in 7 per cent, and an operative mortality in 12 per cent. Sixty-nine of the 75 cases operated upon had been followed postoperatively from four to eighteen months. In the entire group of 75 patients, 51 per cent had good results, 31 per cent had fair results, 10 per cent were unimproved, and 8 per cent had operative deaths. Twelve per cent had been operated upon for a period of less than four months. Cutler and Schnitker<sup>21</sup> report the results obtained in 29 patients with angina pectoris. Twenty-six were observed over three months and 21 over six months postoperatively. The operative mortality was 6.8 per cent; another 13.7 per cent ended fatally, the death not being related to the operation, however. Thirteen per cent had recurrent laryngeal nerve injury, but the voice recovered in spite of paralysis of the cord; 10.3 per cent had parathyroid tetany. In 21 surviving cases, the results were excellent (90 to 100 per cent) in 47.6 per cent; good (75 to 89 per cent) in 4 cases. The results were good in 14 (66.6 per cent) and fair



in 5, a total of fair to excellent results in 19 (90.4 per cent). The results were poor in 2 (9.5 per cent). In other words, 47.5 per cent were improved from 90 to 100 per cent; 66.6 per cent were improved from 75 to 100 per cent, and only 9.5 per cent were improved less than 50 per cent.

Five total thyroidectomies for heart disease have been performed on the Tulane Undergraduate Surgical Service at the Charity Hospital, the longest having been observed fifteen and a half months postoperatively. There were three males (Cases 2, 3, 4) and two females (Cases 1 and 5). The ages varied from forty-four to sixty-one years. Two cases (Cases 1 and 5) had hypertensive heart disease, one (Case 1) auricular fibrillation, and one (Case 5) angina pectoris. Two (Cases 3 and 4) had rheumatic heart disease with congestive failure. One (Case 2) had luetic heart disease with aortic regurgitation. All patients had been treated on the medical service for varying periods of time without success. All cases were unrelieved by ordinary conservative measures and were bedridden before operation. Four of the five patients had congestive heart failure, whereas 1 had severe angina with as many as 14 attacks daily. A cervicodorsal sympathectomy had previously been performed upon this patient with relief of pain in the arm, but no effect on the precordial pain. Basal metabolic determinations were unsatisfactory because of the dyspnea in two (Cases 2 and 4). In the other three cases the preoperative values varied from +3 per cent to +34 per cent, and the postoperative values varied from -2 per cent to -20 per cent. Avertin and local anesthesia were used in two cases (Cases 1 and 3) ethylene in two (Cases 2 and 4), and local analgesia in one (Case 5). The left recurrent laryngeal nerve was injured in three cases, two of which were permanent, one recovering after several months. As mentioned above, this complication can probably be largely obviated by removing the left lateral lobe from the left side. One (Case 3) developed tetany and died six weeks postoperatively as the result of severe gastro-intestinal hemorrhage. It is possible that the hypocalcemia which persisted

in spite of calcium and parathormone administration predisposed to the hemorrhage.

None of the patients died immediately postoperatively. Three have succumbed, six weeks (Case 3), ten months (Case 4) and eleven months (Case 2), respectively, postoperatively. Two are still living, four and a half months (Case 5) and fifteen and a half months (Case 1) postoperatively. Two of the three that died within eleven months after operation were definitely symptomatically relieved for varying periods of time. All the men are dead, but both women are still living. Both of the surviving patients had hypertensive heart disease with decompensation, and 1 had angina. Both these patients are definitely relieved. The patient (Case 5) with angina who has been followed four and a half month postoperatively has had no attacks since the thyroidectomy. Prior to the thyroid operation a cervical sympathectomy gave little relief except that the pain in the left arm was no longer experienced. She is now able to be up and about with little or no discomfort, whereas previously she was bedridden. The surviving patient (Case 1) with congestive heart failure who has been observed fifteen and a half months postoperatively was markedly relieved until an attack of influenza a few weeks ago. Prior to this she did her own house work without symptoms. Since the influenza she has not been able to work because of dyspnea, but she is not bedridden.

#### REPORT OF CASES

Case 1.—Charity Hospital No. 425. Mrs. J. R. DeL., white housewife, aged 53 years. Admitted January 3, 1934; discharged February 20, 1934.

C. C.: Shortness of breath.

P. I.: For twenty years has had hypertension, and for three years had dyspnea on slightest exertion which has grown progressively worse. Occasional edema of feet and ankles. Thirteen years ago, noticed a swelling in neck, which has persisted. December 24, 1933: Became quite dyspneic and developed edema of the face only. Complained of sharp, oppressive, precordial pain, palpitation of the heart, vertigo, and orthopnea.

P. E.: Obese, well-developed, hypersthenic individual. Left lobe of thyroid "slightly enlarged." The heart was much enlarged, measurements were not recorded. Auricular fibrillation. B. P., 180/90. Lower extremities were slightly edematous, pitting upon pressure.



Laboratory Examination: 1/4/34: Roentgen ray of chest: Cardiac shadow is indistinct due to increased lung markings and apparent edema at the base of the lungs, making cardiac measurements impossible. Marked peribronchial infiltration in the upper portion of both lungs. Blood chemistry: NPN, 28 mg. per 100 cc. of blood; urea nitrogen, 14 mg.; creatinin, 1.1 mg.; blood sugar, 95 mg. Blood Wassermann negative. B. M. R. +34 per cent; urinalysis: free from pus cells—catheterized specimen. PSP—70 per cent. E. K. G. Definite electrocardiographic evidence of myocardial disease. Atrial fibrillation (high grade). Occasional multifocal ventricular premature beats. Slight left axis deviation and low T waves. Q. R. S 0.07 seconds. Ventricular rate, 150.

1/17/34: Patient transferred to surgical service. Patient received Lugol's solution and tincture of digitalis preoperatively.

1/25/34: Total ablation of the thyroid gland under avertin anesthesia and local analgesia (1/2 per cent novocain). Following operation hoarseness was noted. Postoperative course uneventful.

2/5/34: Wound healed. Patient states she feels like a new person, is not nearly so conscious of her heart as before. No pulse deficit present. A few ectopics occasionally.

2/7/34: Laryngoscopic examination: Normal movements of right cord. The left cord occupies the midline position and does not move on respiration or vocalization, indicating recurrent laryngeal nerve involvement on left.

Pathologic Examination: On section, thyroid contains numerous cysts with evidence of hyperplasia, colloid and cystic degeneration.

2/12/34: E. K. G. report: Q. R. S., 0.07 seconds; ventricular rate, 95; auricular fibrillation, slight ventricular predominance, digitalis T waves, definite electrocardiographic evidence of myocardial disease; ventricular premature beats present in previous E. K. G. have disappeared.

2/20/34: The patient discharged, "much improved". Patient still hoarse.

3/7/34: Readmitted to Medical Service, complaining of dyspnea and swelling of the ankles for the past five days.

3/10/34: Dismissed from the hospital "improved".

4/9/34: Entered out-patient clinic, complaining of dyspnea and slight edema of ankles. Two weeks duration. B. P., 150/100. Heart: P. M. I. 12.5 cm. to the left in the sixth interspace. Irregular rhythm, A1 very faint. No murmurs heard. Few bubbling rales at the bases of the lungs posteriorly on auscultation. Extremities, no edema. More rest prescribed.

4/13/34: O. P. D.: Generalized edema including lungs, abdomen, and extremities. Liver en-

larged. Given prescription for digitalis, instructed to limit activities more. Patient has done considerable housework, including cooking, which she was not able to do for many months previously: E. K. G.: Auricular fibrillation present, R1 and R2 slightly slurred, low T waves, digitalis, and definite evidence of myocardial disease.

5/1/34: B. M. R.: —10 per cent.

5/5/34: E. K. G. report: Normal cardiac mechanism.

5/9/35: Patient returns for observation. She has not been confined to bed as formerly and has returned to the preparation of meals and light housework. Felt perfectly splendid until one month ago, at which time she had influenza. Since this time has had smothering attacks and dyspnea. She is taking digitalis as per instructions and limiting activities somewhat. Laryngoscopic examination: Slight paresis. Patient still slightly hoarse. The mental attitude is remarkable. Difficult to restrain activities. B. M. R.: —10 per cent.

5/11/35: Blood sugar 74.34 mg. per 120 cc. of blood.

Case 2. Charity Hospital No. 49202. W. M., colored male laborer, 51 years of age. Admitted to hospital November 28, 1933, after having been in the hospital previously a number of times (7), over a period of four years.

Diagnosis: Hypertensive cardiovascular disease with congestive failure and lues, made on previous admission.

C. C.: Swelling of arms and legs, and shortness of breath.

P. I.: In March, 1933, patient suddenly became dyspneic and weak while working and was forced to sit down to rest. Cold sweats and vertigo were experienced. Patient sent to Charity Hospital. At this time had edema of feet and left sided pleurisy. April, 1933, discharged and returned to work. Since April, 1933, his condition has grown progressively worse, and now has continuous dyspnea, fainting spells, a non-productive cough (paroxysmal). Shortness of breath so marked that patient has to sit up in chair at night to rest. While attempting to work, collapsed and was brought to hospital November 28, 1933. On admission the patient was markedly dyspneic and literally "waterlogged". Marked enlargement of the heart with dilatation of the aorta, transverse measurements 17, longitudinal 17:5, and aorta 5.5 cm. Short, rumbling, presystolic murmur at the apex was heard. Medical therapy was successful in relieving him to a marked degree.

2/7/34: Total ablation of thyroid under ethylene anesthesia. Uneventful postoperative recovery. No sweating, shortness of breath, and pulse lost its bounding quality. Laryngoscopic examination showed normal functioning vocal cords. Patient

felt fine. Edema disappeared completely. Pathological examination of the thyroid shows some colloid change, otherwise normal.

3/1/34: Patient discharged.

4/6/34: Readmitted to hospital, complaining of dyspnea, dizziness, and slight swelling of the feet for the past week. He was still, however, not totally incapacitated. Rest in bed and digitalis relieved symptoms.

6/2/34: E. K. G. report: Definite evidence of myocardial disease, left ventricular predominance; digitalis T waves; slight, defective auriculoventricular conduction. Auricular rate, 60; ventricular, 60; Q. R. S., 0.08 seconds.

7/18/34: P. S. P., 25 per cent, two hours; B. P., 160/90; Wassermann negative.

7/27/34: Patient objectively as well as subjectively greatly improved. Discharged.

1/6/35: Patient readmitted to hospital in semicomatose condition. No history obtainable. Slight apnea and generalized anasarca. Face puffy. Moist rales at base of both lungs. Heart, apex impulse sixth interspace, 1 cm. outside of mid-clavicular line. Rate 120. Regular rhythm. Abdomen: Skin edematous, small amount of ascites. Extremities: Legs and feet markedly edematous. Reflexes—knee jerks absent. B. P., 110/72; P. S. P., first hour 20 per cent, second hour 15 per cent; blood Wassermann +; NPN, 27 mg.; blood sugar, 95.

1/6/35: Infusions of 50 per cent dextrose and digitalis given.

1/7/35: Patient looks better. Edema subsiding, but still marked. Patient rational. Extract of thyroid, grs. 2 t. i. d.

1/11/35: Abdomen markedly distended. Edema of feet and ankles has disappeared.

1/13/35: Patient expired.

Autopsy: Thyroid wound healed. Peritoneal cavity, 500 cc. free, bloody fluid. Pleural cavities, extensive, fibrinous adhesions of the right lung, and less extensive adhesions to the left lung. Five hundred cc. of straw-colored fluid in the pleural cavity. Pericardial cavity, pericardium markedly thickened, fibrinous adhesions between the pericardium and epicardium. Considerable fibrinous exudate free in the cavity and a slight amount of fibrin collected around the base of the heart. Three hundred cc. sero-hemorrhagic fluid in the cavity. Heart weighs 560 gms. Coronary arteries sclerosed. Kidneys, right 194 gms., left 184 gms. G. I. tract, diffuse petechiae upper portion of small intestine from a point approximately two feet from the duodenojejunal junction to the middle one-third of the ileum. Shows diffuse condition, subserosal, punctate, capillary hemorrhages surrounding the small bowel and extending from 3 to 5 cm. between the folds of the mesentery.

Anatomical Diagnosis: Hypertrophy and dilatation of the heart, acute fibrinous pericarditis, bronchiectasis, chronic pleuritis, multiple capillary thrombosis of the small intestines, chronic passive congestion of the liver, spleen, and kidneys.

Case 3. Charity Hospital No. 5836. P. W., white boiler-maker, aged 44 years. Admitted February 10, 1934; died, May 5, 1934.

C. C.: Shortness of breath, weakness and palpitation of the heart of eighteen months duration, aggravated by exercise.

P. I.: December of 1933, had been confined to bed in Charity Hospital and was treated for cardiac decompensation. Worked until 12/15/33. Chief complaint at that time fainting spells, coughing, and spitting up of blood. Complained the past three years of transient, non-painful swelling of knee joints. Patient states the knees were hot to touch, and yet no elevation of temperature (oral) was present. Cough productive, frothy, and blood-tinged the last eighteen months. Patients returns to the hospital because of the "heart attacks" which occur while walking and also because of smothering sensations and coughing up of frothy material. Vertigo the past two years. Lost twenty-five pounds the last two months.

P. E.: B. P., right 106/76; left 110/88. Capillary pulsation visible through finger nail beds. Fingers moderately clubbed. The heart is enlarged. A<sub>2</sub> greater than P<sub>2</sub>. Loud blowing, systolic murmur and soft diastolic at the apex. Loud blowing, rough systolic murmur at the aortic area. Abdomen distended, bulging in flanks, and shifting dullness, and fluid waves are present. Liver palpable, four finger breadths below the right costal margin. Lower extremities slightly edematous. Diagnosis: Rheumatic heart disease, with mitral and aortic involvement.

Laboratory Examination: 2/17/34: Roentgen ray of the chest shows considerable enlargement of the cardiac shadow. Borders of the heart obscured by increased density at the base of the lungs, probably edema. There is also considerable hilar and perihilar infiltration on the left side in the mesial portion of the lung. E. K. G., R1 and R2 slurred; occasional ventricular premature beats, prominent P<sub>1</sub>. Digitalis waves, extensive myocardial damage. Conservative therapy produced little improvement.

3/22/34: Total ablation of thyroid under avertin anesthesia.

3/23/34: Laryngoscopic examination: Vocal cords normal. No recurrent laryngeal paralysis. Oxygen given through intranasal catheter. Infusion of 5 per cent dextrose.

3/27/34: Complaints of numbness and tingling in extremities. Trousseau and Chvostek's signs positive. Serum calcium 8 mgs. per 100 cc. of blood.

Patient given parathormone and calcium gluconate two days.

3/29/34: Patient is able to walk about the ward. Tingling and numbness have subsided. Serum calcium report, 6.8 mg.

4/11/34: Serum calcium, 5.8 mgs. Parathormone increased from 16 units every other day to 10 units every day. An abdominal paracentesis was done and 100 cc. of straw-colored fluid removed.

4/16/34: Transferred to Medicine.

5/6/34: Tarry stools. Vomited bright red blood.

5/9/34: Feels better. Slight abdominal distention. Thyroid extract gr. 1 t. i. d.

5/11/34: Still vomiting blood. Pale. Condition restless.

5/12/34: Died.

Laboratory Data: Normal thyroid.

Autopsy: Heart enlarged, 450 gms. Numerous hemorrhagic, superficial erosions in the stomach. No evidence of thyroid remnant. Rheumatic heart disease.

Case 4. Charity Hospital No. 16002. J. F. H., white male laborer, aged 61 years. Readmitted to hospital April 19, 1934; died March 17, 1935. Since 1932 the patient has been in the hospital sixteen times for congestive heart failure, at which time digitalis, rest, and diuretics were prescribed. During the past few weeks his condition has grown progressively worse.

P. E.: Neck veins slightly engorged, apex beat 11 cm. to the left in the sixth interspace. Thrills none, shocks none. Pulse 62, irregular (fibrillation). Normal volume and tension  $P_2$  decreased but greater than  $A_2$ . Loud musical systolic murmur. Musical element loudest about the fifth interspace, near the sternum. Apex covered by a rough blow, very loud. Diastolic at apex, short and followed on second sound. Opening snap of mitral valve. Musical murmur probably aortic. B. P., 148/84. Liver four finger breadths below right costal margin. E. K. G.: Low grade auricular fibrillation. Prominent S waves, low R waves, definite electrocardiographic evidence of myocardial disease. Patient treated with bed rest and digitalis.

5/1/34: Total ablation of the thyroid gland under ethylene anesthesia.

5/7/34: Voice hoarse. Laryngoscopic examination: Left recurrent laryngeal paralysis.

Postoperative course uneventful.

5/14/34: Patient discharged. Not suffering precordial pain or dyspnea but is greatly relieved of previous symptoms.

Pathologist's Report: The thyroid gland normal.

5/15/34: Patient readmitted, because he has no

one at home to take care of him. Chief complaint dizziness. Is greatly improved. Heart no longer decompensated. Has no dyspnea or precordial pain.

5/16/34: Discharged.

7/6/34: Readmitted. Chief complaint mass in inguinal region, which proved to be a large, left inguinal hernia of 15 years' duration. Appetite is poor, patient weak, listless, dull, and apathetic. He is quite dyspneic, edema of the ankles is present; but less than two months ago when the thyroid gland was removed.

7/23/34: Discharged.

1/28/35: Readmitted.

C. C.: Dyspnea and swelling of ankles. Patient ceased taking digitalis of his own volition, and since then has become more dyspneic and edematous. At the present time is almost in the state of anasarca and is unable to sleep in a reclining position. B. P., 190/100.

P. E.: Many rales over base of lungs. Heart enlarged to left and downward. Rhythm irregular. Numerous ectopics. Systolic murmur at all valve areas. Abdomen swollen and greatly enlarged. Marked pitting edema of extremities. Pulse 80, aortic  $A_2$  murmur.

1/31/35: Edema markedly reduced.

2/5/35: Greatly improved, edema free. Digitalized at present to toxic point.

2/10/35: Sitting up. Still some ascites.

2/11/35: Discharged.

3/8/35: Readmitted.

C. C.: Pain in heart, shortness of breath, and swelling of body.

P. E.: Practically the same as on previous admission. Marked edema generalized. The course of the patient was progressively downhill and he died, 3/17/35. No autopsy obtained.

Case 5. Charity Hospital No. 58452. Mrs. C. B. housewife, aged 61 years. Admitted December 5, 1934; discharged 1/29/35.

C. C.: Pain in precordium and left arm.

P. I.: Patient well until two years ago, at which time was brought to hospital in diabetic coma. After stabilization was discharged and given a diet to follow. Approximately one year ago started to have vise-like pains over sternum, which radiated to the back and down inner aspect of left arm, forearm, and hand to fingers. Attacks became worse and at time of admittance to the hospital was having eight to fifteen attacks daily. Relieved by nitro glycerin placed under the tongue. These attacks usually lasted three-quarters of an hour.

P. E.: Apex beat fifth interspace, well outside the midclavicular line. Heart moderately enlarged. No definite murmurs,  $P_2$  slightly greater than



A<sub>2</sub>. Pulse 124 and regular. Liver slightly enlarged.

Laboratory Findings: Blood sugar, 150 mg. per 100 cc. of blood. Wasserman negative NPN 27 mg. per 100 cc. of blood. Urea nitrogen, 10.2.

12/12/34: Left cervical sympathectomy performed with resection of lower cervical and first thoracic ganglia. Horner's syndrome developed.

1/1/35: Pain in area relieved, but still has precordial pain.

1/6/35: Continuous attack of pain during the day, but not as severe as previously.

1/7/35: One attack of pain today. Skin of the left hand, arm, face on the left, is dry and warm to touch.

1/9/35: Horner's syndrome persists. One attack of pain today in spite of absolute bed rest. B. M. R. +10.

1/11/35: Severe anginal pain last night, lasted one hour. Relieved by nitroglycerin, one tablet.

1/14/35: Two severe attacks of pain day before yesterday, and one last night.

1/17/35: Total ablation of the thyroid gland under local analgesia. In removing the left lateral lobe recurrent laryngeal nerve was caught in a ligature which was immediately removed at time voice change was noticed.

1/18/35: No anginal attacks. Change in voice.

1/24/35: Postoperative convalescence uneventful. Laryngoscopic examination shows paralysis of left vocal cord. No anginal attacks since operation. B. M. R. —20.

1/28/35: Patient on exercise. No angina since operation.

1/29/35: Discharged, feeling fine. Wound healed and voice change improving. To return to clinic for observation and for treatment of diabetes mellitus.

5/9/35: Patient returns for observation. Has had no pain since thyroidectomy. Is, however, weak and tires easily. Able to do light housework, whereas previously was completely incapacitated. B. M. R. —20 per cent. Laryngoscopic examination shows no abnormality in vocal cords.

5/11/35: Blood chemistry, 180.18 mg. per 100 cc. of blood.

#### REFERENCES

1. Pratt, Gerald H.: Complete thyroidectomy in advanced heart disease, *Am. J. Surg.*, 28:85, 1935.
2. Parry, C. H.: *Collected Works*, London, Underwood, 1825, Vol. 2, pp. 478-480.
3. Kocher, A.: Ueber Marbus Bascdowi, *Mitt. a. d. Grenzgeb. d. Med. u. Chir.*, 1:1, 1902.
4. Hamilton, B. E.: Clinical notes on hearts in hyperthyroidism, *Boston Med. and Surg. J.*, 186:216, 1922.  
Idem: Heart failure of congestive type caused by hyperthyroidism., *J. A. M. A.*, 83:405, 1924.  
Idem: Heart failure of congestive type caused by hyperthyroidism, *Surg. Clin. N. Amer.*, 4:1411, 1924.
5. Lahey, Frank H. and Hamilton, B. E.: Thyrocardiacs: Their diagnostic difficulties: Their surgical treatment, *S. G., and O.*, 39:10, 1924.
6. Christian, Henry A.: Total Ablation of the thyroid, *J. A. M. A. (Correspondence Section)*, 104:64, 1935.
7. Idem: Heart and its management in myxedema, *Rhode Island Med. J.*, 8:109, 1925.
8. Idem: The Diagnosis and Treatment of Diseases of the Heart, Chapter XII, p. 274, *Oxford Monographs on Diagnosis and Treatment*, Vol. 3, p. 355, New York, Oxford Press, 1928.
9. Blumgart, H. L. and Weiss, S.: Studies on velocity of blood flow, *J. Clin. Invest.*, 4:149 and 173, 1927.
10. Blumgart, H. L.; Garfill, S. L.; and Gilligan, D. R.: Studies on the velocity of blood flow: XIII. The circulatory response to thyrotoxicosis, *J. Clin. Invest.*, 9:69, 1930.
11. Idem: Studies on the velocity of blood flow. XIV. The circulation in myxedema with a comparison of the velocity of blood flow in myxedema and thyrotoxicosis, *J. Clin. Invest.*, 9:91, 1930.
12. Blumgart, H. L. and Weiss, S.: Studies on velocity of blood flow: V. The physiological and pathological significance of velocity of blood flow, *J. Clin. Invest.*, 4:199, 1927.
13. Idem: Studies on velocity of blood flow: X. The physiological and pathological significance of velocity of blood flow, *J. Clin. Invest.*, 6:103, 1928.
14. Idem: Studies on velocity of blood flow: XI. Pulmonary circulation time, the minute volume blood flow through the lungs, and the quantity of blood in the lungs, *J. Clin. Invest.*, 6:103, 1928.
15. Weiss, S. and Blumgart, H. L.: Effect of digitalis bodies on velocity of blood flow through lungs and on other aspects of circulation, *J. Clin. Invest.*, 7:11, 1929.
16. Blumgart, H. L. and Weiss, S.: Effect of digitalis bodies on velocity of blood flow through lungs and on other aspects of circulation, *J. Clin. Invest.*, 4:555, 1927.
17. Blumgart, H. L.: The velocity of blood flow in health and disease, *Medicine*, 10:1, 1931.
18. Blumgart, H. L. and Berlin, D. D.: The importance of decreased cardiac work in the relief of angina pectoris by total ablation of the thyroid, *Am. J. Physiol.*, 109:11, 1934.
19. Effinger, E. C. and Levine, S. A.: The effect of total thyroidectomy on the response to adrenalin, *Proc. Soc. Exper. Biol. and Med.*, 31:485, 1934.
20. Levine, S. A.; Ernest, A. C.; and Jacobsen, B. M.: Use of epinephrine as a diagnostic test for angina pectoris, with observations on the electrocardiographic changes following injections of epinephrine into normal patients and into patients with angina pectoris, *Arch. Int. Med.*, 45:191, 1930.
21. Cutler, E. C. and Schnitker, M. T.: Total thyroidectomy for angina pectoris, *Ann. Surg.*, 100:578, 1934.
22. Shambaugh, P.: Experimental angina pectoris in the dog, with particular reference to the effect of total thyroidectomy, *Proc. Soc. Exp. Biol. and Med.*, 31:978, 1934.
23. Lahey, F. H.: End results in thyrocardiacs, *Ann. Surg.*, 90:750, 1929.
24. Pemberton, J. de J. and Willis, F. A.: Cardiac features of goiter, *Ann. Surg.*, 95:508, 1932.
25. Rosenblum, H. H. and Levine, S. A.: What happens to patients with hyperthyroidism and significant heart disease following subtotal thyroidectomy, *Am. J. Med. Sc.*, 185:129, 1933.
26. Blumgart, H. L.; Levine, S. A.; and Berlin, D. D.: Congestive heart failure and angina pectoris, *Arch. Int. Med.*, 51:866, 1933.
27. Friedman, H. F. and Blumgart, H. L.: Treatment of chronic heart disease by lowering the meta-

bolic rate: The necessity for total ablation of the thyroids, *J. A. M. A.*, 102:1, 1934.

28. Berlin, D. D.: Therapeutic effect of complete thyroidectomy on congestive heart failure and angina pectoris. II. Operative technic, *Ann. J. Surg.*, 21:173, 1933.

29. Mixer, C. G.; Blumgart, H. L.; and Berlin D. D.: Total ablation of the thyroid for angina pectoris and congestive heart failure, *Ann. Surg.*, 100:570, 1934.

30. Wolferth, C. C.: Total thyroidectomy for cardiac failure, *Ann. Surg.*, 101:1276, 1935.

31. Blumgart, H. L.; Berlin, D. D.; Davis, D.; Reseman, J. E. F.; and Weinstein, A. A.: Treatment of angina pectoris and congestive heart failure by total ablation of the thyroid in patients without thyrotoxicosis. X. With particular reference to the preoperative and postoperative medical management, *Ann. Int. Med.*, 7: 1469, 1934.

Friedman, L. M.: Treatment of angina pectoris and congestive heart failure by total ablation of the thyroid. V. Importance of laryngoscopic examination as a means of preventing bilateral paralysis of the vocal cords, *Arch. Otolaryng.*, 19:383, 1934.

#### DISCUSSIONS

Dr. Urban Maes: The historical aspects of complete thyroidectomy for cardiac disease have been so thoroughly covered by Dr. Ochsner that it is unnecessary to go into them further, except for one point. Blumgart arrived at his conclusions by studying the velocity of the blood flow before and after thyroidectomy, but the rationale of the procedure is really based on the relief that can be given by thyroidectomy to the embarrassed and overworked heart associated with certain types of thyroid disease. We are especially indebted to Dr. Frank H. Lahey for his repeated emphasis upon this point.

The mortality of this form of treatment is too high to be lightly dismissed. The risk of the operation is undeniable, and I am afraid that all surgeons who undertake it will go through a period when they will lose a certain number of patients. The hopeful thing is that in such clinics as Cutler's in Boston, where the operation is used with relative frequency, the mortality is steadily diminishing.

I have done in all six cases. Two patients died in the hospital, one of progressive cardiac failure, the other of pneumonia and mediastinitis following postoperative edema of the larynx. A third patient, who left the hospital alive, died two months later of lobar pneumonia. He was a chronic alcoholic, and how much the recent operation had to do with his death it is impossible to say. Of the three patients who are living, one has not compensated at all. The other two, although they still have recurrent cardiac attacks, are definitely improved.

The selection of cases is probably the most important consideration at present. There is no longer any question as to whether in complete thyroidectomy we have a form of therapy that can offer something to cardiac patients. We have. Which patients they are, however, and how they

are to be selected, are other matters. It goes without saying that the closest cooperation between the internist, particularly the cardiologist, and the surgeon is essential, but that is not enough. Electrocardiograms are helpful but again they do not go far enough. The patient whose disease is purely cardiac must be separated from the patient whose disease is associated with thyrotoxic disease, and recent reports suggest that studies of the cholesterol content of the blood may be helpful here.

The most important consideration, it seems to me, is the estimate of the degree of myocardial damage, particularly when angina and coronary disease are associated with it. Slowing down the blood current is not going to help a patient whose myocardium is very badly damaged. I cannot agree with Dr. Ochsner that such patients stand any chance of being benefited, although I do agree with him that the control of myxedema following complete thyroidectomy need give us no special concern.

We had no injury to the recurrent laryngeal nerves in any case in this series. So far we have had only one case of tetany, with a markedly reduced hemoglobin and blood calcium. Dr. Veal studied a large series of cadavers and found that polar ligation of the thyroid artery was usually an effective precaution against damage to the parathyroid glands. He found, too, that many supposed parathyroid glands, which he had identified by the methods applicable in vivo, proved on removal to be merely lymph nodes.

My own opinion is that we should not perform this operation on moribund patients. All the literature on the subject shows that this has been done, and it amounts to an attempt at resurrection. I feel very strongly that the patient who does not show some response to medical measures is not likely to respond to surgical measures, and we discredit a valuable procedure by performing it in such cases. I should have done better, I think, to let the patients in my series who died in the hospital do their own dying without surgery. They were doomed, regardless of what was done for them, and there is no question in my own mind that I sped them on their way.

Dr. I. I. Lemann: If we are to get any further along with the procedure it seems to me that the responsibility of choosing cases must be that of the internist rather than that of the surgeon. With all due humility and due recognition of the ability of the surgeon, I should say that the man who has been treating heart disease, watching heart disease, seeing the end results, and evaluating the prognosis of the patient in the past, is in much better position to judge what that patient might or might not do than the most skillful surgeon.

That brings us to the consideration of the very

thought that both Dr. Ochsner and Dr. Maes stressed, namely, that it is not fair to the method to reserve to it only the moribund and the hopeless cases. On the other hand, I think the men who have treated heart disease must feel that at least the better cases should not be subjected to this risk, because there are a certain number of cases we all know that will remain well and resume a certain amount of activity and usefulness again. We must, therefore, be prepared to select a group between these two extremes, not the moribund, not the hopeless case, and not the most hopeful case, but a group restricted to those cases in between, and because of that restriction, I fear, just *a priori* that the method must have a very restricted field of usefulness. So much for congestive heart failure.

When we think of angina I think we must come to the same conclusion again, that the method can be used for a restricted number of cases. It cannot be used for those patients who have been subject to myocardial infarction. Where the angina syndrome is due to coronary occlusion, this method is not applicable. Nor is it applicable to the more hopeful cases where angina is rather of infrequent occurrence and milder type. It must be restricted, therefore, to that group of patients who have no history of infarction of the heart muscle and yet have frequent attacks of angina. Dr. Ochsner described one of his cases, practically a status anginosus. When we have status anginosus it is almost probable we are dealing with coronary occlusion. If the method is useful in angina, it is useful in a very select number of cases.

Dr. Chaille Jamison: It seems to me we are losing sight of a certain principle in this discussion. As I understand this whole procedure it is merely to further—I am speaking of congestive heart failure—an already well recognized principle, pure rest to the heart and therefore to relieve the load on the heart. Now backed by the same procedure we can say reducing the needs, the tissue needs of the heart, that we add to the amount of rest in a greater degree than can possibly be gotten by putting the patient to bed. It looks to me like strictly the logical thing to do.

Now, selection of cases is, of course, difficult. I fear that we are not by electrocardiograms, or by any chemistry yet known, going to have a method to tell us when this procedure is indicated. But it does seem that any internist who has seen a sufficient number of cases of congestive heart failure, sees case after case who recuperates, then after a little effort fails again—I do not believe there would be any great difficulty in selecting cases that we are perfectly certain in the course of a few months under the ordinary requirements of life are going to die, and that could not get suf-

ficient rest—I believe those cases should come under the class we should operate. I do not believe we should send the moribund to the surgeon, but I do believe we can select a group that have failed time and time again because they cannot get enough rest by the recognized method.

Now again, the question of myocardial injury. There is not any medical man who has followed cases to autopsy who has not seen hearts, and especially hypertensive cases, where you cannot see what is the matter. You put it under the microscope and you cannot see what is wrong, simply the muscle fibrosed, and one really feels terribly when one realizes the man has died without adequate pathological reasons. Of course, that does not apply to infarction and rheumatic heart disease, where there is a great deal of injury. We are speaking of congestive heart failure, as though it was really a question of the heart. After all, when congestive heart failure exists for a sufficient length of time there is going to be injury to the heart or cirrhosis eventually. The same thing is true of the kidney. These things should be thought of before recommending thyroidectomy. I have had one case, just the type I am speaking of, that we would have expected to die in the next attack of congestive heart failure. He had two, came back in two or three weeks after his discharge with the third attack and began to compensate pretty well. I know the minute he got out of bed he would fail. He needed more rest and the only way he could get it was by reducing the metabolic rate. The only method I know of was to remove the thyroid. This was done quite successfully by complete ablation. The patient made an uneventful recovery and died ten months later of congestive heart failure. I was inclined to think that hypothyroidism had set in, and that he had not followed his instructions and that had considerable to do with his death.

I believe we have a method of great value. Now, my experience so far has been that the surgeons are not wanting hard cases to operate on, especially in the reports we have had tonight. We cannot say to the cardiac getting along pretty well. "Here, add to your risk." We can only send those cardiacs to the surgeon and say to them, "Now you are hopeless. Either you have got to stay bedridden, and even if you stay bedridden it is only a question of a few months, or something has got to be done to get the lead off your heart." I do not believe it is an impossible problem to select such cases that are not a risk. We know when we control the basal metabolism we are going to help solve the problem. I think it has added very greatly to what we may do for the hopeless case of congestive heart failure.

Dr. Leo. N. Elson: I think of course that in



cardiac cases operation on the thyroid is in principle very good. The thyroid is a dynamic organ; i. e., a highly active and activating organ, and, with the exception perhaps of the adrenals, is more than any other organ most actively concerned with the heart and the whole cardio-vascular system in health and disease. Hence the extirpation of the thyroid in advanced diseases of the heart would doubtless be of great value. To advise, however, as a regular procedure in these cases, to resort to so formidable an operation in patients with such lowered vitality would appear risky and very hazardous.

I would suggest looking for safer means in cardiac cases to inactivate the thyroid. I have in mind two cases of essential hypertension which have been benefitted (I can say cured) by roentgen ray irradiation of the thyroid. I was intending to report them in due time.

Many years ago, in what was then a very old medical publication by Sajous, I read where, in speaking of the high activity and virulence of cancer cells of the breast, he advises the inactivating of them by injection of alcohol in the cancerous breast. I thought then that it might be worth while trying to use multiple injections of the thyroid with alcohol to inactivate it or at least to diminish its activity. There ought to be some merit in it.

A rational procedure, however, in advanced cardiac cases would be to use roentgen ray irradiation of the thyroid—short exposures say of about  $\frac{1}{2}$  minute—at frequent intervals of about five or six days for a prolonged period of time. There is a rule that the susceptibility of an endocrine organ to irradiation is directly proportional to its dynamicity, and the thyroid being highly dynamic should be greatly inactivated by irradiation. If irradiation does not in some cases inactivate the thyroid completely it may be a good preliminary to thyroidectomy. This will broaden the field which the essayist advocates.

Dr. Randolph Lyons: I feel this is such an important subject it should be thoroughly discussed because it is in its incipency now, and I believe any of us who have had the opportunity of hearing Blumgart and Cutler account cannot help but be impressed and believe that it has value in selected cases. Two weeks ago, I heard Dr. P. D. White mention it as an addition to our armamentarium.

The selection of cases is the important thing. Dr. Lemann and Dr. Maes and Dr. Jamison brought out this point I think very well. I agree with Dr. Lemann that selection of cases should be made by the internist, who has had experience with cardiac cases and he should be the one to select the cases. In the congestive heart group, Blumgart recently laid down some new rules. Previous-

ly, he advised operation on cases which had decompensated and could not regain it even while in bed. Such cases are no longer considered suitable. If the patient is unable to gain a certain amount of compensation while in bed, it is a hopeless proposition to operate on the thyroid with it added dangers and risk. In the anginal group, he laid particular stress on the angina of effort as being particularly well adopted for operation. There is no point in operating on those individuals who have an attack at long intervals. But the individual who cannot walk more than a few steps without having pain, I believe that particular individual is the one for operation.

We realize from what we have heard here tonight that the operation has definite risks. In the first place, it should not be undertaken if the basal metabolic rate is below fifteen or twenty, because then we throw the patient into myxedema. Then we have to give the patient thyroid to get rid of the myxedema. Consequently, the patient with a low rate is a poor risk. We should not operate on the patient who cannot regain compensation. Further, the operation should not be undertaken by every surgeon. I think if this method becomes universal the death rate will become high because it requires special skill and training. I do believe that in properly selected cases the procedure is of very definite value.

Dr. Edgar Hull: I think we have a ready explanation for the high mortality in the series of cases that Dr. Maes told you about, and perhaps also for the mortality in Dr. Ochsner's series, and that is in the mode of selection of patients for the operation. I had something to do with the selection of cases in Dr. Maes series, and this is the way we went about it: At the time we began this work, the types of cases suitable for total thyroidectomy, according to the criteria laid down by Blumgart, included patients with congestive failure who had never completely compensated after prolonged rest in bed. It seemed logical to us to select cases of this kind for operation, because these patients are doomed anyhow; we were loath to advise a dangerous operation, the beneficial effects of which are decidedly problematical, to patients whose cardiac compensation can be restored by medical measures, even if their activity is limited because of their heart trouble. Four of the patients in Dr. Maes series had advanced cardiac failure, and had shown little improvement after prolonged rest in bed with medical treatment. The three deaths in the series were all from this group of patients. It is not hard to understand a high mortality in cases who were such poor operative risks.

Let me relate in a little more detail the type of cases that were operated upon in Dr. Maes' series:

One was a young man with rheumatic heart disease (mitral stenosis), who had had prolonged rest without establishment of compensation. He died four or five days after the operation of progressive cardia failure. Another was a young woman with rheumatic heart disease who still had edema and hydrothorax after a long period of rest in bed; she was the patient who died of pneumonia and mediastinitis. The third was a somewhat elderly woman with old rheumatic heart disease and probable superimposed cirrhosis of the liver; this patient still lives, although she has to have paracentesis performed at frequent intervals. The fourth was a middle aged man with mitral stenosis, who had been bed ridden for many months; he lived some months after the operation, and was able to be up and about, but succumbed to an attack of lobar pneumonia. At autopsy his mitral orifice was found to be less than the diameter of a lead pencil. It is difficult to see how any therapy could have helped him. The fifth was a middle aged woman with both rheumatic and hypertensive heart disease, in whom slight failure persisted after prolonged bed rest; she is living fifteen months after her operation, and may have been benefited. The last patient was a young girl with essential hypertension and intractable cardiac pain; her electrocardiogram suggested that she had marked disease of the coronary arteries. This patient is alive a year after thyroidectomy, and has experienced considerable relief from pain, although she now has edema of the ankles in the afternoons.

Dr. Ochsner's patients also seem to have been persons with advanced disease, and it still seems to me that these were proper cases to select, persons who had nothing to lose. After our experience with the first few cases we learned that we would not gain much by operating on the doomed patients, who were already practically moribund, and our criteria have been restricted so much that I have not found a patient in eleven months whom I consider a suitable subject for total thyroidectomy. I should still advise the procedure in cases of angina pectoris whose attacks occur very frequently in spite of good medical treatment, and perhaps in patients who have had recurrent attacks of failure but who compensate when put to bed.

Dr. I. L. Robbins: I want to ask Dr. Ochsner if he would tell us about the status of the heart following the total ablation of the thyroid. Whether, for example, there was any change in the hypertension or if the heart decreased in size, whether for instance there was any rhythmic change? I also want to state that in the case Dr. Bloch operated on, the patient had very many extra systoles and after operation the extra systoles per-

sisted and the size of the heart remained the same as before operation.

Dr. Alton Ochsner (In conclusion): I am indeed grateful to all the discussors for this extensive discussion. I, too, want to say with Dr. Lemann, as in Dr. Maes' case, the internists referred all our cases; we had nothing to do with the selection of the patients. If any surgeon knows as little as I do about heart disease, he has no business choosing cases.

I cannot agree with Dr. Jamison about the results. One reason the mortality has been so high, I believe, has been because of the cases we had. One who died six weeks postoperatively died as a result of the operation. The others were definitely improved and all died of cardiac failure. I believe there is a group of individuals, however, in which total ablation of the thyroid probably offers some help.

Dr. Lemann states that the number of cases in which the operation is indicated is few. In Boston there are apparently more. They have done over 200 in two years' time and gotten good results. One would expect this, however, because they are the proponents of the theory. I do not believe anyone advocates using the procedure in the individual who is relieved by medical measures and who is compensated by conservative methods. It is the individual who cannot be up and about who might be aided.

Luetic heart disease is a definite contraindication to the operation, whereas rheumatic heart disease offers a better prognosis.

As regards changes in these cases postoperatively, which Dr. Robbins referred to, there have been few changes. One patient's hypertension was much less. One patient with auricular fibrillation showed slight arrhythmia postoperatively.

Undoubtedly these cases have to be chosen by the internist and the operation is not a panacea, but probably does offer something for individuals who would otherwise be doomed to invalidism. We cannot speak of one case, but certainly one case with angina which we had was materially benefited, and this is the opinion of the Boston group who have had a great deal of experience with this.

## MYCOTIC INFECTIONS OF THE SKIN\*

JAMES K. HOWLES, M. D.

NEW ORLEANS

The study of mycotic infections of the skin, commonly called dermatomycoses dates back to

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1839 when Lagenbeck discovered the first parasitic fungus of man, which is known today as *Oidium* or *monilia albicans*, the causative fungus of thrush. The study and investigation of fungi goes even farther back to the time of Hook in 1677. That early mycologist studied the yellow spots found on rose leaves and made drawing of the mycelia composing these fungous growths. Hook believed that fungi arose from decaying matter by a process of spontaneous generation, and while his belief has not been substantiated, his work stimulated intense research. It is important to note the lapse of time that occurred from the original work on plant fungi in 1677 to Lagenbeck's discovery in 1839, when the first fungous infestation of the human was found. The century and a half intervening between these two vital discoveries was a fruitful period for the early workers in the field of mycology, as shown by the numerous observations and discoveries of fungous growths, which are recorded in the medical literature of that time.

Although the science of mycology antedates that of bacteriology many years, the advent of the later science seemed to over-shadow the importance of fungi completely, and it was not until the beginning of the last century that the parasitic fungi of man again attracted much attention.

To appreciate fully the progress made in the field of mycology during the nineteenth century, it is but necessary to read some of the more important mycological contributions of that time. Lagenbeck's accidental discovery of the thrush fungus in the oral mucosa of a typhus case in 1839, Schoenlein's discovery of the causative fungus of favus, and Robin's investigations which were reported in 1843 on *Oidium albicans* did much to stimulate further research. Gruby in 1844 found the causative fungous of ringworm infections, and pointed out the importance clinically and mycologically of the variation in the size of the spores produced by this fungus. In 1846 Eichelstedt contributed to the fast growing knowledge of mycology, the causative fungous of pityriasis versicolor.

Although the study of fungi continued to attract attention until the latter part of the nine-

teenth century, when the discoveries of Koch and Pasteur in the field of bacteriology almost completely overshadowed the interest in mycology, the beginning of the twentieth century found a revived interest in parasitic fungous diseases of man. This rejuvenation was thought to be caused by the post war demobilization of soldiers, who had intermingled with allied combatant troops from infected localities, and thus precipitated an enormous outcropping of superficial fungous diseases, principally tenial infections. Legge, Bonar and Templeton believe that the nation-wide distribution of ringworm infection in the United States, may, in part, be due to importation into this country through the medium of students from India, China and Japan attending our institutions of learning. Certainly this influx of foreign students has been more common since the advent of the twentieth century. The so-called "Hong-Kong foot", "Shanghai foot", "Mango Toe" of Ceylon and many similar conditions of the foot found so common in tropical and semi-tropical countries are really fungous infections.

Although there may be differences of opinion as to the mode of dissemination of fungous diseases the point of interest to us is that there has been a revival of mycotic interests and this concerns us here in New Orleans, a semi-tropical seaport city at the cross roads of the tropical and temperate countries.

My purpose in this paper is to collate facts concerning these mycotic infections of the skin, for I believe it is as necessary to compare and weigh these mycological truths as it is to establish them. It seems pertinent, indeed necessary, to occasionally pause and look in retrospect over the work being done in any field of endeavor, and thereby impress it, upon our minds. In a community such as this where fungous diseases are so prevalent, one should be fungous conscious, so to speak, and be aware of the frequency and importance of these vegetable parasitic growths. A report of some 3000 cases of mycotic infections of the skin is given as an excuse for reading this otherwise academic paper, for we as physicians demand something more than a didactic lecture on a subject as common as mycology. It is.



hoped that the author will be pardoned for a few elementary remarks, which seem to be indicated in presenting a paper which embraces such a vast field of dermatology.

Fungi are widely distributed in nature. They are responsible for many plant and animal diseases and play an important part in our every day life. While practically every branch of medicine is affected by fungous diseases, it is in the field of dermatology that fungi play some of their greatest roles as pathogenic agents. Many skin diseases are due to fungi, ranging from such a banal infection as tinea versicular to coccidioidal granuloma, a disease of high mortality.

Modern advertising mediums have so disseminated the phrase "athlete's foot" that most of us associate fungi only with ringworm of the feet and forget the varied roles that fungi play in industry and in disease. Molds, yeast and actinomyces are of economic importance because of their enzymes and toxins. They are the causative agent in the spoiling of food-stuffs and other organic products in industry, and they play an important part in the circulation of the elements of organic matter in nature, thereby maintaining soil fertility. Fungi also bring about chemical reactions of value to man in producing industrial ferments. In this paper I must limit my remarks to a brief discussion of the role these fungi play in producing diseases of the skin or dermatomycoses.

Mycotic infections of the skin are exceedingly common occurrences and in the temperate and subtropical climates where they constitute the bulk of clinical mycoses. We no longer think of fungous diseases as tropical infestations, for even here in the temperate climate of Southern United States, the dermatomycoses are the most common of the group of skin diseases. This selective localization in the integument is perhaps due to the fact that the causative fungi of these mycotic infections of the skin are of low invasive power, and their activity is confined mostly to the skin proper. The deep mycotic infections are much less common than the superficial mycoses and fortunately so. Mycologically, and biologically they lend themselves to a classification into a saprophytic and pathogenic group. The resultant

clinical syndromes, which they produce may be designated as saprophytic and pathogenic dermatomycoses respectively. The pathogenic dermatomycoses may be further subdivided into superficial and deep groups.

#### SAPROPHYTIC DERMATOMYCOSES

The saprophytic growth of fungi on the epidermis or hairs is not a true infection, and is accompanied by little or no inflammation. The saprophytic group includes pityriasis versicolor, erythrasma, piedra and pinta. The foremost in this group is pityriasis versicolor or tinea versicolor as it is generally called and is very commonly seen in this section of the country. The causative fungus of pityriasis versicolor is the *microsporon furfur* and was discovered by Eichelstedt in 1846. The disease is extremely chronic, being found mostly in people with moist skins for that reason it is common in the skins of patients suffering from pulmonary tuberculosis. The eruption is very superficial and manifests itself largely on the trunk, in the form of variously sized and shaped non-elevated, non-inflamed, sharply defined plaques or macula, yellowish brown in color and covered by fine brown scales. The organism responsible for this condition may be found with comparative ease in the scales of lesions when the latter are mounted in sodium hydroxide so other clinical conditions belonging to this group are namely:—Erythrasma, caused by the *microsporon minutissimum*, Pinta or spotted sickness which is caused by a number of varieties of *aspergillus* fungi and is quite common in Mexico, Central and South America. The last of this group is Piedra or Trichoporosis, and is a disease of the hairs. It is frequently encountered among South American Indians.

According to Jacobson<sup>1</sup> these saprophytic dermatomycoses are characterized by several features which are as follows:

1. The causative fungi are quite numerous in the superficial layers of the skin and are easily demonstrated microscopically.
2. These fungi are very difficult to culture.
3. Inflammation is not associated with their presence.
4. Extreme chronicity is the rule.

5. They are not transmissible from man to man.

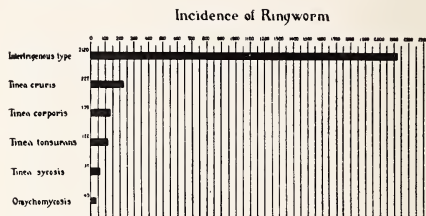
#### SUPERFICIAL PATHOGENIC DERMATOMYCOSES

It seems proper to first consider the superficial diseases of this pathogenic group which includes trichophyten infections, microsporosis, epidermophytosis, favus and tinea imbricata infections.

The organisms responsible for these superficial pathogenic dermatomycoses belong to the fungi imperfecti (no sexual reproduction processes have been observed in them). These fungi are vegetable parasites which infest the human skin. The trichophyten microsporon and epidermophyten groups embrace the large variety of tinea infections commonly called ringworm and may involve any part of the smooth skin, scalp and nails. The common forms are (1) tinea circinata or tinea corporis, the type involving the glabrous skin, (2) tinea tonsurans or tinea capitis, the variety that often infects the scalps of children, (3) tinea sycosis, or tinea barbae, the common barbers' itch which appears on the bearded areas of men and must be differentiated from coccygenic sycosis, (4) the vesicolor tenia infection, frequently involving the interdigital area of the toes and fingers, as well as the palms and soles, and formerly classified as eczema, (5) the tinea cruris infections commonly called "jock-strap" itch or dhobie itch, and seen in the axilla and crural areas, and lastly (6) tenia of the nails or onychomycosis, which is the most chronic of all the forms of ringworm, being most recalcitrant to treatment.

The cultural study of these fungi is a most intricate one due to their pleomorphic character. A large number of species have been reported and several classifications have been presented, based either on the appearance of the parasite in the infected hairs or their cultural characteristics, but time will permit a mere mention of these classifications. Of 2087 tinea cases which were studied microscopically and mycologically only ten per cent of the cultures from clinically and microscopically cases were proven positive from a mycologically standpoint. Thus the difficulty is culturing these superficial pathogens can be readily

appreciated. The following chart will show the clinical classification of the tinea infections of this series.



The chart shows the marked predominance of the intertrigenous group. The types of fungi found in this group were varied. In a previous paper a mycological report was made of the same two thousand and eighty-seven cases of infections intertrigo showing the types of fungi encountered.<sup>2</sup> The scope of this paper is too large to permit details of any one group of pathogenic fungi. Even such an important group as epidermophytids must be omitted. The association of fungous infections and allergic dermatoses is becoming a subject of vital interest to dermatologists, and future research in this field may change many of the accepted theories that prevail concerning contact and sensitization dermatoses.

A separate description of the three genera composing the fungi responsible for this clinical group of ringworm or tinea infections is necessary, but time will not permit such an outline. It must suffice to mention that the genera microspora, trichophyta and epidermophyta all belong to the fungi imperfecti, and are classified by one of the several methods of classification depending upon their cultural and morphological characteristics, as well as their clinical manifestations.

Tinea favosa belongs to still another genera known as the achoria and while this clinical entity is not a curiosity in this country, the disease is so rare that a description of it seems unnecessary in such a short paper. Favus is not indigenous to this country, but is occasionally found among immigrants of any age. It is said to be caused by the achorian *Schönleini* and its clinical appearance is quite characteristic.

Regarding tinea imbricata or Tokelau infec-

tions the rarity or total absence of this disease in temperature climates other than in museums or cutaneous exhibits renders its description unimportant to us.

There are several other varieties of superficial pathogenic mycotic infections of the skin, which are common in this climate. Cutaneous moniliasis is becoming more common since its recognition as a clinical entity at the early part of the current century. Many of the skin eruptions formerly diagnosed as eczema or ringworm have come to be classified as monilia infections. Shelmire<sup>3</sup> has given a most comprehensive summary of the monilia infections of the skin. He classified them into six groups as follows (a) generalized cases occurring in those subjected to continuous water bath therapy; (b) cases occurring in nursing infants; (c) intertrigenous cases; (d) paronychia; (e) onychia; (f) dysidrosiform eruptions. This classification has done much to elucidate the subject of monilia infections of the skin so that today we know that moniliasis is not an infection peculiar to children and debilitated people. Monilia involvement of the mucous membranes of the mouth, genito urinary tract or vagina is a subject too vast to discuss in this paper.

Erosio blastomycetica interdigitalis is a yeast infection of the interdigital spaces. It is commonly seen in the hands of laundresses and is a form of mycotic intertrigo. Moisture enhances the growth of the causative yeast, so its chronicity in workers whose hands are continually wet is readily understood. This condition is recalcitrant to treatment.

#### DEEP MYCOTIC INFECTIONS

The deep mycotic infections of the skin are of interest to all branches of the profession, but principally to the surgeon and dermatologist. The most important of these deep pathogenic fungus infections are as follows: (a) blastomycosis, (b) actinomycosis, (c) sporotrichosis, (d) coccidioidal granuloma and (e) maduromycosis or mycetoma.

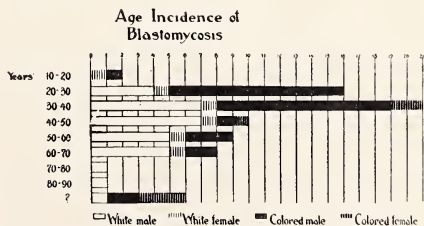
#### BLASTOMYCOSIS

The term blastomycosis in its broader implications covers all conditions due to yeast-like fungi or budding fungi. To Wernike goes the credit for first describing the clinical en-

tity which later became known as blastomycosis of the skin. In 1890 that scientist working in Buenos Aires described two cases of papillomatous eruption in which he found peculiar bodies which were at first considered protozoa, hence the disease was called "protozoic dermatitis." Gilchrist<sup>4</sup> in 1894 reported the first clinical case of blastomycosis in this country, but it was not until 1896 that the same author, in collaboration with Stokes, reported the second case of a similar infection of the skin and knew of its etiology. There followed numerous reports of similar dermatoses both here and abroad, which had, prior to that time, been improperly classified as scrofuloderma or syphilis. In 1901 Ricketts published a complete monograph on the subject of blastomycosis.

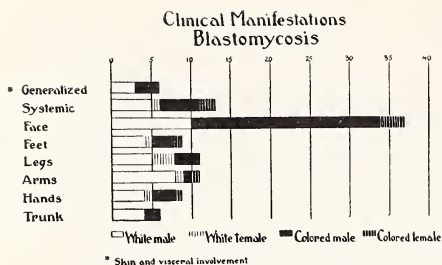
Medical literature is replete with reports of cutaneous blastomycosis. There seems to be no distinct geographic predilection for this mycotic infection. The disease is protein in its clinical manifestations and every organ in the human economy seems to be susceptible to the ravages of the blastomycotic fungus.

The disease affects all ages. Cases are reported occurring as early as five months. Males are more frequently infected than females. Environment seems to play a determining role in its causation. The following charts will show the age incidence and clinical distribution of this series of cases, collected mostly from the records of Charity Hospital.



The predisposing cause seems to be a variety of factors. The industrial classes are chiefly affected. The exciting cause is one of a group of vegetable parasites known as blastomyces—or pathogenic yeast fungi. In 1929 Spring<sup>5</sup> compared seven strains of organisms, causing blastomycosis in the human. A mycological





study of these fungi would require far more time than that allotted to this paper, but a brief discussion of the clinical manifestations seems pertinent. There are two principal types of the disease, (a) dermal blastomycosis, (b) systemic blastomycosis. Since this paper is concerned with the dermatomycoses, only the dermal form will be considered. Dermal blastomycosis is characterized by the presence of raised oval patches with a fungating papillamatus or verrucoid surface. Pain is not usually noticed nor is itching commonly associated with these growths. A violaceous halo frequently encircles these vegetating growths, only occasionally is adenopathy of the regional lymph glands found. The course of the disease is chronic, lasting for years. At first, the general health is not affected, but later general wasting and marked anemia may be encountered in the chronic sufferers. The histological picture is fairly characteristic and the finding of the typical large double contoured yeast-like cells in the smears clinches the diagnosis.

The protein character of cutaneous blastomycoses is striking. It is often confused with tertiary syphilis, tuberculosis cutis, occidoidal granuloma and malignant neoplasms. The skin lesions may be primary in character or may involve the skin secondary to a primary blastomycetic infection of some of the deeper tissues internal viscera or bony structures. The primary lesions of the skin are either papulo ulcerative, verrucous or gummatous. The purplish or violaceous red color of these primary skin lesions is quite characteristic, as are the classical marginal abscesses. The peripheral extension with central healing is common to all mycotic infections of the skin. The exposed

surfaces seem to be sites of predilection, as often the fungi gain entrance through a wound due to traumatic injury. Early diagnosis of this infection can be made by examining smears taken from the exuded pus for the yeast-like cells. Histological study of skin sections will also show the fungous in the upper portion of the corium and in the epidermis. Any organ of the body may be involved, and there is a high rate of mortality associated with systemic blastomycoses. In the superficial type the subjective symptoms are usually mild and the prognosis is favorable.

#### ACTINOMYCOSIS

In 1904 Wright<sup>6</sup> aptly defined actinomycosis as a "suppurative process combined with granulation tissue formation." LeBlanc in 1826 is reported as being the first to describe "lumpy jaw," the disease in cattle which is identical to human actinomycosis. Bollinger in 1877 fully described the same disease in cattle. Just one year later Israel reported the first case of human actinomycosis and in 1882 Parfick established the unity of the animal and human forms of this mycoses. In this country Murphy in 1885 described the first cases of human actinomycoses in Chicago. Sanford and Magrath's extensive presentation in 1921 of 215 cases collected from the literature and from the records of Mayo Clinic, was the most extensive work done on the subject up to that time. Sanford in 1923 collected some 678 cases from every available source and even with such a massive survey was of the opinion that actinomycoses was much more common than it was thought to be, he believed the discrepancy to be due perhaps to improper diagnosis.

My small series of nine cases, seven of which occurred in the cervicofacial area, one on the right foot, and one on the left wrist, is too small to even mention, but is included as part of this meager survey of dermatomycoses.

The causative fungus is the actinomyces bovis belonging to the family of nocardaceae. The *Nocardia Israeli* described by Kruse in 1896 is also accredited with causing this disease. While the disease is thought by the older writers to be more common among farmers or workers in rural communities, due to con-

tact with infected grain, the mode of entry into the body is debatable. Many believe the fungus enters the body at sites of abrasions on the mucous membranes of the mouth or skin, and even through carious teeth.

Others students of the disease cite statistics showing the high prevalence of the disease among city workers. This latter group believe that the actinomyces are normal saprophytic inhabitants of the buccal cavity and gastrointestinal tracts of man and animals, and under proper conditions these inoffensive saprophytes become pathogenic fungi and produce the disease which we recognize as actinomycosis. While the common age limits are twenty to forty, six of my nine cases occurred between the ages of forty and sixty. Seventy-five per cent of the cases of this small series were men, which is a fairly consistent finding, as it is estimated that 80 per cent of the cases occur in men. The relative infrequency of actinomycoses in this section of the lower Mississippi Valley is due to the occupation of the men and the type of agriculture practiced. In the upper Mississippi Valley, which is part of our country's extensive grain belt, the disease is quite common.

As is true in other deep pathogenic mycoses, the entity known as actinomycoses may be divided into cutaneous and visceral types. In this paper our interest is only in the cutaneous type, although this form of actinomycosis is usually secondary to a deeper seated involvement. The disease shows a special tendency to spread in tissues of the connective tissue type, such as areolar tissue, fibrous tissue, bones, and muscles. The cervicofacial area is the favorite site in the human. The angle of the jaw being the usual location selected. The pathological picture is that of a non-specific granuloma. The process usually begins as a solitary nodule in the epidermis, but the corium and sub-cutaneous layers become involved due to an extension downward of the infection. The nodules in the epidermis softens and eventually ruptures exuding a serious purulent or sanguineous fluid. In this exudate the characteristic sulphur-yellow granules, containing the ray fungus, may easily be identified. The nodules ulcerate and may either leave a thin

atrophic scar or crusting of the ulcer may occur. New nodules form and the cycle is repeated, each nodule going through the stages of evolution from the nodular to the softening and ulcerating stage.

Cutaneous actinomycetic involvement when secondary to a deeper seated infection often occurs in regions adjacent to either the buccal thoracic or abdominal cavities.

The scope of this paper will not permit a thorough description of the various clinical manifestations of cutaneous actinomycosis. The clinical picture of a cutaneous actinomycosis is fairly characteristic and constitutes a sufficiently distinctive syndrome to justify a clinical diagnosis; but in this day of laboratory medicine a clinical diagnosis does not always suffice. The clinical appearance of this disease at times so closely resembles cutaneous syphilis, tuberculosis, sporotrichosis, coccidioidal granuloma and even carcinoma that the ultimate diagnosis in these cases must depend upon the finding of the "ray fungus" in the granules exuded from the softened nodules.

The prognosis depends largely upon the anatomical region involved, as well as the age and condition of the patient. It is a chronic disease with a tendency to run a protracted course, however, in the cutaneous type the prognosis is good. Such cannot be said of the thoracic and abdominal cases which are associated with a very grave outcome and almost always terminate fatally.

#### SPOROTRICHOSIS

The third disease of this group of deep mycotic infections of the skin is sporotrichosis and though there is none of this class of dermatomycoses in the present series it seems pertinent to mention a few of the major characteristics of the disease. Sporotrichosis is a subacute or chronic infectious disease caused by one of a group of fungi belonging to the genus *sporotrichum*. This genus is characterized by the production of pearshaped conidia which arise directly from the mycelium.

The late nineties of the century just passed were active years for the research workers in the mycotic field, for during that period much of the present knowledge of the deep mycotic

infections of the skin was founded. Although sporotrichosis was recognized as early as 1809 by Link, it was not until 1896 that Schenck<sup>7</sup> gave it general recognition by describing the disease accurately. Schenck's work in this country was closely followed by further reports from France contributed by De Beurmann and subsequently sporotrichosis has been found in all parts of the world.

The disease process is a non-specific granuloma and like the other deep mycosis it may be localized in the cutaneous or subcutaneous structures or it may be generalized. Its protean nature is compatible with other entities of this group of mycotic, infectious granulomas and all tissues and organs of the body may be involved. De Beurmann<sup>8</sup> has described several clinical types, ranging from disseminated gummatous lesions to a localized lymphangitic type.

The clinical appearance while usually quite characteristic, at times is confusing and the ultimate diagnosis must depend upon the recovery of the causative fungus, which is in some stages most difficult. A serological diagnosis can be made by resorting to a mycotic agglutination test. This serological method is most convenient when no aspirated material can be obtained from suspected lesions for cultural or microscopical study. A complement fixation test is used in some cases, adopting a modification of the original Bordet-Gengou technique. The use of animal inoculation as a diagnostic adjunct is occasionally practiced.

The lesions of sporotrichosis must be differentiated from tularemia, leprosy, tuberculosis and syphilis principally, but sometimes a simple coccycenic infection mimics it. The lemon-yellow serous discharge of sporotrichosis is highly infectious and a marked degree of autolucubility exists.

In a paper covering such a large field of cutaneous medicine a detailed description of the various clinical entities cannot be given, so the reader is referred to the works of De Beurmann<sup>8</sup>, Crutchfield<sup>9</sup>, Gougerot<sup>10</sup> and others for complete elucidation on the subject of sporotrichosis.

It must suffice to say that the cutaneous variety of this disease responds satisfactorily to

adequate therapeutic measures if the infection is recognized soon enough. Even the systemic involvements yield to proper treatment if started early.

#### COCCIDIOIDAL GRANULOMA

Since Wernicke's recognition of this disease as a clinical entity in 1891, numerous reports of the infection have appeared in the literature. The disease is now known as a more widely prevalent disease than it was originally thought to be and we no longer recognize it as a mycotic disease found only on the Pacific Coast.

The exciting etiologic agent is the vegetable fungus *coccidioides immitis*. The predisposing factors are numerous but the disease seems to be more prevalent in males of the laboring classes. Aphuls has classified the disease into three clinical groups, but Jacobson supplements three other clinical manifestations. *Coccidioides* is covered very thoroughly by the last named author in his text and a report of any observations pertaining to coccidioidal granuloma would only be repetition. This disease adheres to the class characteristics of the other deep mycotic granulomas in clinical distribution, but the mortality associated with this disease is much higher than in the more common pathogenic dermatomycoses.

#### MYCETOMA

Four cases diagnosed clinically as maduromycosis or madura foot are included in this series; but of this group only one was proven culturally to be a true mycetoma. In the other three cases the mycological studies never confirmed the clinical diagnosis. All cases were males of the laboring class. Two were negroes and one was a Mexican. The positive cultures were obtained from a lesion on the left foot of the Mexican patient.

Because of the clinical resemblance of madura foot to tuberculosis, syphilis and several other of the infectious granulomas it is impossible to make a positive diagnosis without cultural confirmation. The histopathological picture in most of these mycotic granulomas is of little help from a differential diagnostic viewpoint. As I look in retrospect over the many



mistakes I have made in the diagnosis of deep dermatomycoses, I am prone to believe that some of the cases I thought to be mycetoma were manifestations of the more common infectious granulomas, perhaps syphilis.

The relative infrequency of this disease in the United States warrants the omission of any description of mycetoma from this series. In this paper our concern has been chiefly the common dermatomycoses and some mention of the treatment of these common fungous infections seems to be indicated.

#### RATIONAL THERAPEUTIC MEASURES

Medical literature is replete with descriptions of various techniques and remedies for treating the superficial mycotic infections of the skin.

Since the advent of the radio with its dissemination of "athlete foot" propaganda, the proprietary remedies to combat the fungous growths of the epidermis have been introduced at any amazing rate of speed. Our therapeutic armamentarium for the superficial mycotic infections of the skin may be summarized as follows:

- (a) Abrasive or keratolytic agents
  - (1) Mechanical
  - (2) Chemical
- (b) Fungistatic agents
- (c) Irradiation
  - (1) X-radiation
  - (2) Ultra-violet
- (d) Vaccine therapy

There are other miscellaneous methods than have been recommended, such as the method suggested by Weidman<sup>11</sup> of changing the pabulum by implanting saprophytic cultures in the interspaces of the toes in cases of severe epidermophytosis of long duration, but time will not permit an enumeration or evaluation of these remedies.

It is unfortunate that there is no fungicidal agent that can be used with impunity on the human integument. We must rely on fungistatic remedies to combat the superficial parasitic fungous growths. The best of these is iodine and closely following that in fungistatic properties comes thymol. There are numerous other good fungistatic agents, but the list is too long to be included here. Internal medica-

tions, such as iodides have little or no therapeutic value in these superficial mycoses. Most of the popular ointments of the day contain some keratolytic agent to aid in the mechanical removal of the fungi by desquamating the upper layers of the epidermis.

The value of irradiation is a debatable question except in the vesicular or hyperkeratotic varieties. The principal value seems to be its aid in exfoliation of the involved skin. For an evaluation of the various therapeutic remedies one must refer to the literature of the day, for though quite voluminous it still contains truths as to the effectiveness of the remedies. One eventually adopts or develops a technic distinctly his own, and in time discards it for another. In brief there is no panacea for fungus infections of the skin and until one is found, a combination of the better procedures seems advisable, just which is the better procedure depends on the individual case to be treated.

Regarding the treatment of the deep mycotic infections of the skin the therapeutic armamentarium is somewhat more limited. It may be summarized as follows:

- (a) Internal therapy
- (b) Local therapy
  - (1) Irradiation
  - (2) Medicaments
- (c) Surgical
- (d) General

Regarding the internal therapy sodium or potassium iodide comes nearer to be the ideal drug than any other. Copper salts, as well as numerous other drugs, have been tried, but none have replaced the iodides in the treatment of mycotic granulomas.

X-radiation and radium have their sponsors and each group proclaims the distinct advantages of each of these valuable therapeutic adjuncts. Certainly irradiation is valuable in treating certain of these deep mycoses.

Surgery is still adhered to, but is not used as generally as it formerly was in the treatment of this group of diseases. In mycetoma surgery is still necessary in most of the chronic cases.

Local applications are of little value in the treatment of deep fungus infections, their field

being restricted to the more superficial mycoses.

Time will not permit a further discussion of this important phase of cutaneous medicine, but a final plea for perseverance is made in the treatment of all types of mycotic diseases of the skin for recurrence is the rule in all of them.

#### COMMENT

1. The superficial mycotic infections of the skin are far more prevalent in this vicinity than the deep mycotic granulomata.

2. The ultimate diagnosis of the deep mycotic granulomata is impossible without the identification of the causative fungus.

3. The cutaneous manifestations of all of the deep mycoses, while recalcitrant to treatment, are generally attended with a favorable prognosis unless there is an associated systemic involvement.

4. In the treatment of the superficial fungous infection local applications usually suffice, but in the deeper mycoses internal iodide therapy is necessary.

5. No panacea for cutaneous fungus infections exists. The technic best suited for the individual case seems advisable, but perseverance is the most valuable adjunct because of the chronicity of the dermatomycoses.

#### DISCUSSION

Dr. Ralph Hopkins (New Orleans): Dr. Howles has reviewed for us in a comprehensive way the present status of mycotic infections of the skin. This group of diseases is of importance to the general practitioner as well as to the specialist on account of the incidence of fungal infections in a large percentage of every community in the United States. One variety of ring worm alone infects more than half the population of this country, not excepting doctors. Besides this condition called "athlete's foot" there are other diseases due to vegetable parasites some of which are quite common and readily recognized clinically, while others are rare and very difficult to diagnose; in some the causative organism is readily demonstrated, in others it is found with great difficulty; some are benign and do not even cause discomfort, others are malignant and may terminate fatally; some are easily cured, some with great difficulty, and some prove to be incurable; it is important to remember that none of these diseases are self limited, a placebo will not avail in their treatment; they all require active procedures to destroy the invading organisms. Hence the importance of diagnosis.

Dermatophytosis, called "athlete's foot" or "ringworm" of the foot (both terms are misnomers for the non athlete's are not immune nor are the lesions ring shaped nor is a worm an etiological factor in the appearance of the eruption) occurs on the hands as well as on the feet and on account of the wide prevalence of this condition I should like to emphasize two points made by Dr. Howles. Firstly, that dermatophytosis is frequently complicated by a secondary infection and, secondly, that dermatophytosis often acts as a factor complicating some other dermatosis.

In regard to the first point, it is often observed that a patient may give a history of having had an itching dermatitis of the toes for a long period of time, perhaps years, causing but little inconvenience and conforming to what would be expected in a fungal infection. Then occurred the acute manifestations which resulted in the seeking of medical advice. The toes, and perhaps a large part of the foot may be swollen, red, and blistered or denuded of epithelium, the condition is painful and the patient perhaps unable to stand. My purpose in calling attention to this result of secondary infection is to emphasize the importance of treating the secondary rather than the fungal infection. The inflammation due to pyogenic infection is aggravated by any fungicidal preparation that is of sufficient strength to be of any use in arresting fungal growth. It is far better to use a wet dressing of a saturated solution of boracic acid than to apply salicylic acid or benzoic acid or any other irritant application. The dermatophytosis can be treated after the pyoderma is abated.

In regard to the second point, the most important observation that has been made is in the group of occupational eczemas in those cases in which a fungal infection has been superimposed on a previously existing trade dermatosis. Such dermatoses seem prone to infection by fungi and the finding microscopically of fungus is apt to lead to a diagnosis that does not take into account the fact that the occupational eczema antedated and coexists with the mycosis. An important aspect of these cases is the compensation due the patient. It is obviously unjust to make a diagnosis of a fungal infection not taking into consideration the primary occupational cause that would entitle the worker to compensation. It may further be suggested that attention to the possibility of contact dermatitis as a complicating factor may aid in the treatment of mycotic infections of the hands.

I am sure Dr. Howles will not be permitted to close the discussion of his interesting contribution without answering questions concerning the treatment of fungal diseases, probably concerning "athlete's foot" and perhaps concerning the "athlete's feet" of some of us present tonight. Without wishing to forestall any questions I should

like to tell of an interesting series of experiments conducted under the direction of the late Dr. Schamberg who in his well equipped laboratory for research investigated a large number of the recently developed germicidal and fungicidal preparations, including almost all dyes, with the purpose of determining their potency in inhibiting or destroying fungus. He subsequently tested iodine with the same technique and found it to be by far the most potent of all. Dr. Schamberg recommended the use of metallic iodine incorporated in vaseline. The preparation should not be strong, for unfortunately the iodine is irritating to most skins.

I should like to be one of those congratulating Dr. Howles on his presentation of an important phase of medicine.

Dr. J. A. Devron: I listened with a great deal of interest to Dr. Howles' paper, knowing as I do how hard he works in his laboratory and that he devotes a great deal of study to these things. My purpose tonight is to speak to the general practitioners, who very often have cases which will not respond to treatment. They refer them to the dermatologist, and later the patient returns complaining, "Doctor, you made me spend a lot of money and I am no better." The trouble is that these patients do not seem to realize that where there is no cooperation on their part there can be no success, and they have done nothing the dermatologist told them. I have in mind a case treated by Dr. Howles. He was treated by every dermatologist in town. Patient tried everything and anything that everybody told him. He even went to a filling station and the attendant told him to put gasoline on his hand. He came back to me and I said I would not treat him. He went to Dr. Howles who put him in the hospital and immersed his hands and his feet in a solution for a month, and as he could not go against the rules of the institution he was cured in 6 weeks. Tell your patients they waste money if they do not follow what the doctor tells them.

## TRICHINIASIS IN LOUISIANA\*

E. HAROLD HINMAN, Ph. D.†

Trichiniasis is a cosmopolitan disease found widespread throughout this country but for some unknown reason is reported rarely from the Southern United States. Infection is invariably incurred through eating raw or im-

properly cooked pork or pork products which contain the encysted larvae of *Trichinella spiralis*. The symptoms will be only briefly summarized and correlated with the life cycle of the parasite.

Within one or two days of ingestion of the contaminated meat an intense gastro-enteritis develops which may persist for a week. The fact that several members of the same family or several companions who have eaten from the same table suddenly appear ill simultaneously should help to establish the diagnosis. These early symptoms may be explained by the hatching of the encysted larvae in the intestine and their invasion of the wall of the digestive tube. Within a week these larvae have matured and after fertilization the females start producing embryos into the lymphatics or mesenteric veins. Eventually a single female may give birth to 1500 or more larvae. The embryo measures nearly 100 micra in length but only 6 micra in width which permits passage through the capillaries. From the general circulation these larvae migrate to striated muscle which is essential for their further development.

As soon as the invasion of the muscles commences the symptoms of the second stage of the disease appear, which is an acute myositis. This stage of migration may persist for over two weeks. Following this, symptoms of toxemia may appear, believed to be due to the absorption of poisonous products from the larvae. The ultimate fate of the larvae is calcification of their capsule and even of the young worms themselves. It has been claimed that larvae may remain viable in human muscle up to twenty-five to thirty years. In severe cases as many as several million embryos may be produced.

Laboratory diagnosis may be established in a number of ways. During the stage of migration the larvae may be recovered from centrifuged blood and have been found in cerebrospinal fluid. Rarely the adult worm may be recovered in the feces. Once the muscular invasion has occurred biopsy of the deltoid or calf muscles may demonstrate the encysted larvae. Leukocytosis with marked eosinophilia (even exceeding 50 per cent) should be considered very suggestive of this infection. More recently precipitin and intradermal tests have

\*Read before the Orleans Parish Medical Society June 24, 1935.

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been devised for diagnostic purposes. A review of this work has been presented by Friedlander (1934).

#### PREVALENCE OF TRICHINIASIS

Within the past few years considerable interest has been revived in this infection which had come to be given little concern in the United States. Schwartz (1929) points out that between one and two per cent of the pigs in the United States are infected with *Trichinella spiralis*. Queen (1931) utilized an artificial digestion of 50 gram portions of the diaphragms from 344 consecutive necropsies in Rochester, N. Y. and found fifty-nine (17.5 per cent) were positive for this parasite. A similar series of 58 necropsies at Boston were found to have sixteen (27.6 per cent) positive. In order to compare the accuracy of the serial section method he took ten or more sections, 60 micra dropped between each section, from 73 of the 75 positive diaphragms from these two series, but was able to find larvae in only 17 cases (4.2 per cent of the total series of 402). Another interesting result of his study was that none of the Rochester patients who were infected gave a history of trichiniasis, although some gave a vague "rheumatic" story. Riley and Scheffley (1934) examined the diaphragm muscle from cadavers used in the dissecting rooms of the University of Minnesota Medical School and found 20 out of 117 cadavers (17.9 per cent) infected with *Trichinella*. Their technique was to slice thin sections and mount in the trichina compressors similar to those used by the Federal Bureau of Animal Industry. These writers point out that a digestion method might have given a considerably higher number. In no instance was there any information to indicate that there had been any suspicion of trichiniasis.

Frant (1934) published cases reported to the New York City Health Department from 1929 to 1933 which totaled 166 cases (an average of 33 per annum). In analyzing his data it was found that 92 were females and 74 males. This he explained because cooking is usually done by women and the possibility of sampling while cooking is therefore more likely to occur in the case of females. He points

out that it is a well known fact that trichiniasis is usually more prevalent among Germans and Italians, and of the New York cases, nearly one-third occurred amongst Italians and an equal number amongst Germans. In studying the case histories it was found that out of the 52 who had eaten pork sausages, 14 individuals definitely stated that they had eaten raw sausages, and out of 86 cases giving a history of eating fresh pork, 15 admitted having eaten it raw. Such a record is not one to be proud of in a supposedly civilized country!

The regulations governing the meat inspection of the United States Department of Agriculture states (Regulation 18, Section 7, Paragraph 4): "Inasmuch as it cannot certainly be determined, by any present known method of inspection, whether the muscle tissue of pork contains trichinae, and inasmuch as live trichinae are dangerous to health, no article of a kind prepared customarily to be eaten without cooking shall contain any muscle tissue of pork unless the pork has been subjected to a temperature sufficient to destroy all live trichinae or other treatment prescribed by the Chief of the Bureau". This latter treatment requires "that all parts of the muscle tissue of pork shall be subjected to heat at a temperature not lower than 137°F. or be refrigerated at a temperature not higher than 5°F. for a continuous period of not less than twenty days or be treated by curing as hereinafter prescribed." The curing permits dry salting, pickling or smoking methods which have proved effective.

#### TRICHINIASIS IN LOUISIANA

The report of the Louisiana State Board of Health for 1902-1903 records 17 cases, with 4 deaths, of trichiniasis in March, 1903 in Richland Parish. All had eaten smoked sausage made from the flesh of one hog. Out of 21 individuals eating this sausage, 17 became sick. Microscopic examination of the sausage revealed the presence of *Trichina spiralis*. This appears to be the only record of proven infection from Louisiana.

#### PRESENT SURVEY

In view of the widespread distribution of trichiniasis it was deemed advisable to make a routine study of two hundred consecutive ne-

cropsies from the State Charity Hospital of Louisiana, omitting only infants. Small pieces of diaphragm muscle, measuring about two inches square were obtained\*, finely ground up in a meat grinder and placed in a 1 per cent solution of pepsin with 0.5 per cent hydrochloric acid. About 200 c.c. of the solution was used for each 10 grams of muscle, following the technic of McCoy (1931). This mixture was placed in an Erlenmeyer flask in an incubator at 37°C. for five to six hours, during which time it was continuously stirred by means of a paddle connected to an electric motor. By this method most of the muscle was digested liberating the capsules if present. At the end of this interval the material was strained through wire gauze (to remove coarser particles) into a funnel which was closed by a rubber tube and pinch cock. Sedimentation was allowed to go on for one hour after which a few c.c. were drawn off from the bottom of the funnel and examined microscopically for the encysted capsules or larvae. These capsules, being heavy, especially if calcified, settled to the bottom of the funnel rapidly.

Of the 200 human diaphragms examined, seven (3.5 per cent) were found to contain encysted larvae of *Trichinella spiralis*. The distribution of these cases according to age, sex, color, etc. is shown in Table I.

TABLE I

Case No.	Age	Color	Sex	Parish	Nativity
1	67	c	m	East Baton Rouge	Louisiana
2	65	w	f	Orleans	Louisiana
3	36	c	m	Orleans	Louisiana
4	53	w	f	Livingston	Missouri
5	55	c	m	Jackson	Michigan
6	64	w	m	Orleans	Indiana
7	52	c	m	Orleans	Louisiana

In going over the histories of these seven cases it is surprising to find that none of them (with the possible exception of Case 3) contain any symptoms referable to trichiniasis. This patient admitted having had rheumatism at the age of twelve. While three cases have resided outside of Louisiana, Case 6 was of recent origin since active larvae were observed

within the capsules and was probably acquired within the state. Case 5 was operated upon in the Shreveport Charity Hospital five years ago and Case 4 was a patient in the Dibert Memorial four years ago. It may thus be assumed that all seven cases were of local origin. The distribution according to sex, color, age or parish does not present anything of interest.

If one is to judge from the numbers of larvae found in the diaphragms, all of these cases must have been rather light infestations and probably produced few if any clinical manifestations. Serial sections failed to reveal any embryos in those instances where this method was used. In two of the seven cases larvae were found active within the capsules, indicating that the infection had not been present long.

The existence of a 3.5 per cent infestation with *Trichinella* amongst patients dying in the Charity Hospital certainly points to the fact that trichiniasis cannot be regarded as a public health problem of no significance in Louisiana. Careful differential diagnosis should reveal the presence of clinical cases in this state.

The digestion technic might very well be utilized in the examination of biopsy material from suspected cases and may demonstrate larvae which are too few to be found by serial section. No explanation can be offered for the low incidence found in this state compared to other parts of the country.

#### INCIDENCE OF *TRICHINELLA SPIRALIS* IN RATS IN NEW ORLEANS

Through the kind cooperation of Dr. W. H. Seemann, Bacteriologist of the City Board of Health, the diaphragms from 200 rats captured in the City of New Orleans were examined microscopically and subsequently by the digestion technic. Of these only one (0.5 per cent) was found to contain larvae of *Trichinella*. This is a remarkably low incidence but may be explained by the fact that many of the rats were immature if one can judge by the size of the diaphragms. Younger rats would not have an opportunity to become infected. The rat normally serves as a very important reservoir of this infection. Rats secure the parasites either by consuming the refuse of pigs from abattoirs or slaughter houses or by eating dead infected rats. Since pigs readily consume dead

\*The writer wishes to express his appreciation of the assistance given him by the Department of Pathology of Charity Hospital, whose kind cooperation made this study possible.

rats or pork refuse the cycle is continued through this domestic animal to man.

## SUMMARY

1. Examination of 200 human diaphragms by the "digestion" technique from autopsies of Charity Hospital revealed seven (3.5 per cent) to be infected with *Trichinella spiralis*. This incidence is much lower than that reported from other parts of the United States.

2. A survey of 200 rats captured in the City of New Orleans showed only one (0.5 per cent) parasitized by *Trichinella*.

3. The "digestion" technic used in this study might well be utilized in the examination of biopsy material from suspected cases and possibly will reveal certain light infections.

4. Since Government inspection does not certify freedom from *Trichinella* it becomes necessary to educate the public to properly cook all pork products. Apparently many of our population do not appreciate the dangers of eating insufficiently cooked pork.

## REFERENCES

- Frant, S.: Five years experience with trichinosis in New York City. U. S. Public Health Reports 49:869-875, 1934.
- Friedlander, R. D.: The present status of the diagnostic intradermal tests for human trichiniasis. Amer. Jour. Med. Sci. 188:121-123, 1934.
- McCoy, O. R.: Immunity of rats to reinfection with *Trichinella spiralis*. Amer. Jour. Hyg. 14:484-494, 1931.
- Queen, F. B.: The prevalence of human infection with *Trichinella spiralis*. Jour. Parasit. 18:128, 1931.
- Riley, W. A., and Scheffley, C. H.: Trichinosis of man a common infection. Jour. Amer. Med. Assoc. 102:1217-1218, 1934.
- Schwartz, B.: Trichinosis. A disease caused by eating raw pork. U. S. Dept. Agric. Leaflet No. 34, 1929.

## CLINICAL ASPECTS OF TRICHINIASIS\*

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Infestation by *Trichinella spiralis* is rare in the Southern states, as may be shown by a study of the U. S. Public Health Reports for the past five years (1930-1934 inclusive). During this period, four cases were reported from Georgia, a group probably with the same source,

for they were all in one monthly report, and one case from Tennessee.

## CASES OF TRICHINIASIS, 1930-1934 INCLUSIVE

U. S. Public Health Reports			
EASTERN STATES		MIDDLE-WESTERN STATES	
Maine .....	1	Ohio .....	37
Connecticut .....	78	Michigan .....	22
Massachusetts .....	126	Illinois .....	49
New York .....	473	Iowa .....	15
New Jersey .....	101	Minnesota .....	37
Pennsylvania .....	107	North Dakota .....	11
Maryland .....	15	South Dakota .....	14
WESTERN STATES		SOUTHERN STATES	
Montana .....	2	Kansas .....	1
Colorado .....	1	Tennessee .....	1
Oregon .....	18	Georgia .....	4
California .....	367		

The table shows the widespread distribution of trichiniasis in the Eastern, Middle-Western, and in some of the Western states. Obviously, the reports do not give the true incidence, since many cases are either not diagnosed or reported. However, the reports do, no doubt, indicate the relative incidence of the disease.

From the findings reported by Dr. Hinman, an incidence of 3.5 per cent of infestation in 200 necropsies, it is apparent that trichiniasis may be encountered in Louisiana. The Charity Hospital records from their earliest date carry only a single instance of the diagnosis of trichiniasis. Unfortunately this record is lost, so it was impossible to learn upon what evidence the diagnosis was based. In these many years the diagnosis has probably been missed at this institution, for it is the experience of every clinician that a disease rarely encountered is seldomly considered in differential diagnosis on occasion.

Because the foregoing paper has shown that isolated cases of the disease must occur in this state, it will not be amiss to briefly review the clinical picture of trichiniasis as we have met with it in our experience.

Trichiniasis may be found in isolated cases, but at times it is found to occur in groups. We have seen the disease on a number of occasions under both circumstances in the past fourteen years.

Our first observation of group infection was

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with a physician, a relative, in a small Iowa town. This group consisted of ten persons. These were part of a larger group of about two dozen cases in the surrounding community. The infection with trichina had occurred by the eating of "summer sausage", a home-made, smoked pork sausage, favorite dish of the German farmers in that community. A group of thirty or more persons had attended a family reunion and of these about two dozen were infected. (The source of the infection was traced by the Board of Health and the diagnosis proved by muscle biopsies in a sufficient number of cases).

The next experience with a group of cases was with that of seven patients under our care in a Utah mining camp. The patients were all Greek miners who ate their meals at the same boarding house. The source of infection here was inadequately cooked pork, which had been purchased from a farmer who did his own slaughtering. We did biopsies in four of the seven patients with positive results in each case. All seven had shown almost identical symptoms, and all had shown high eosinophilia, so we may accept the whole group as having suffered from trichiniasis.

A third group, of whom we saw several, was that of four students at the University of Michigan, who had picked up the infection while on a football trip to a neighboring state. On the trip they had eaten insufficiently cooked pork at a restaurant. Upon their return to Ann Arbor they soon developed the clinical picture of trichiniasis and three cases were proven at biopsy. This group was reported by Bettison<sup>1</sup>.

We have seen a number of isolated cases of the infection interspersed between these groups and since the last group, at such institutions as the State University of Iowa Hospital, Cook County Hospital, and the University of Michigan Hospital. In fact, we have seen it frequently enough in the middle west to consider it in the differential diagnosis in our teaching, in cases suggesting the diagnosis of arthritis and acute systemic infections, and have made the diagnosis purely on the basis of history on several occasions.

Clinically the disease is usually not recognized until the stage of invasion, for it is then that

the patient is likely to present himself, and it is only by questioning with regard to preliminary symptoms that a rounded out picture may be obtained and the relationship to the ingestion of pork established. The most frequent preliminary symptoms are of gastro-intestinal origin, and in my cases have been present in the majority of instances, but it should be recognized that the history may be negative until the onset of the invasive period. The gastro-intestinal symptoms are due to the enteritis set up by the free parasite in the small gut and appear from twenty-four to forty-eight hours after ingestion of the infected meat, to persist from one to ten days; some reports deal with such symptoms lasting for weeks. Since the gastro-intestinal symptoms are such common ones, as nausea, vomiting, diarrhea and abdominal cramps, it is apparent that the average lay person will not consult his physician, for such symptoms are usually considered due to food indiscretion. The diagnosis in the preliminary stage is thus not probable, unless suspicion is aroused by group infection from a common source.

The usual course of events is, then, that the patient presents himself upon the appearance of symptoms of invasion, which coincide with the invasion of the voluntary muscles by the trichinella larvae beginning from about the seventh to tenth day. At such times chills may occur and the temperature may range from normal to 104°, depending upon the extent of the invasion. It has been my experience that the presenting symptoms have been either edema of the face and eyes, or extreme muscle pain, or both. In the group of seven miners mentioned above, the first two cases were seen on the same day because of edema of the eyelids and conjunctivitis. It was only when the second such case presented itself that my interest led me to search for eosinophilia, as I had considered the first to be acute upper respiratory infection with possibly sinusitis. Patients complain bitterly of the myositis. Movement of the limbs is associated with extreme pain, and therefore the extremities may be held or propped in positions producing the least tension. Pain is referred most usually to the gastrocnemii, deltoids, and muscles of the back.

The degree of pain in a group of cases may vary from little to great severity, apparently depending upon the dose of invading organism. The muscles of mastication may be involved. The most alarming picture is that with apparently extensive involvement of diaphragm and intercostal muscles. Besides the marked dyspnea, pain is referred to the chest wall and upper abdomen, and every breath taken causes excruciating pain.

Edema, not only of the characteristic facial type, may occur anywhere in the body, especially of the extremities. Loss of weight is not infrequent in the course of the disease, depending upon its severity. The physical findings to be expected are indicated by the symptomatology. I wish to emphasize only the extreme tenderness of the muscles on palpation. From the laboratory standpoint the blood picture only is of significance. A leucocytosis of from 15,000 to 30,000 is usual. Every case with which I have had contact has presented an eosinophilia of from 35 to 65 per cent, an important diagnostic feature.

A few diseases must be considered in the diagnosis. An enteritis due to food indiscretion or ordinary food contamination is the usual consideration in the preliminary stage of gastro-intestinal symptoms. The literature indicates that cholera has been considered in outbreaks with severe intestinal manifestations.

During the stage of invasion, several diseases must be considered in diagnosis. Sinusitis may be thought of in the presence of the edema of the eye-lids, and the conjunctivitis. To me, rheumatic fever or acute infectious arthritis have suggested themselves most often upon taking the history. Examination, however, quickly shows the absence of joint involvement. In the more severe cases with prostration, typhoid fever may suggest itself.

Conner<sup>2</sup>, some years ago, pointed out atypical features in trichiniasis which no doubt lead to failure of diagnosis in some cases. Among these are the cases without fever, and those without leucocytosis, or either absence or late appearance of eosinophilia. In rare cases there may be a palpable spleen, skin lesions suggestive of rose-spots and a positive Widal test. With extensive edema and fluid in the serous cavi-

ties, acute nephritis may be simulated. He described cases with edema of the glottis and attendant symptoms of respiratory obstruction. A confusing picture simulating meningitis may present itself with nuchal rigidity, photophobia, delirium, positive Kernig sign and increase of the cells in the spinal fluid. We had the good fortune to observe such a case on the neurological service of Dr. C. D. Camp, at the University of Michigan Hospital. The diagnosis in this case was later checked by muscle biopsy.

The major diagnostic points in trichiniasis are fever, facial edema, painful and tender muscles, leucocytosis with high eosinophilia, and a preliminary period of gastro-intestinal disturbance following the ingestion of pork. The final proof rests on muscle biopsy usually taken from deltoid or gastrocnemius, weeks after the invasion has occurred. In the literature of recent years there have been described serologic and skin tests for assistance in diagnosis. We have not had the opportunity to use these.

Mortality from infection with *Trichinella spiralis* has varied from 1 to 30 per cent in different outbreaks. We have not seen death from the disease, though two deaths occurred in the first group described in the paper.

On treatment there is nothing to offer. If, during the stage of gastro-intestinal symptoms, trichinella infection is suspected, purgation is indicated. Otherwise, during the stage of invasion, treatment is symptomatic. The arsenicals have been suggested during the invasive period. We have tried neo-salvarsan in a number of cases with apparently no beneficial effect.

#### REFERENCES

1. Bettison, W. L.: Trichinosis; report of four cases, with recovery, occurring in the university of Michigan student health service. J. A. M. A. 86:609, 1926.
2. Conner, L. A.: Atypical clinical forms of trichiniasis, Ann Int. Med. 3:353, 1929.

#### DISCUSSION

Dr. Edgar Hull: Dr. Kampmeier has asked me to open the discussion of his paper, not because I have any great knowledge of the subject under discussion, but because I had occasion, through the kindness of the late Dr. R. G. Douglas, to see three cases of trichiniasis, which occurred on a plantation in Caddo Parish in 1928.

The disease occurred almost simultaneously in three persons who had eaten the meat of a recent-

17 slaughtered hog; two of the persons were negro plantation hands, the third, the plantation owner. Dr. Douglas asked me to get a blood count on the plantation owner, and if I remember correctly, trichiniasis was not suspected until a marked increase of eosinophiles was observed on the smear. This patient had high fever, edema of the face, conjunctivitis, and dyspnea, but I do not recall his having had any muscular pains.

Undoubtedly some cases of trichiniasis have escaped diagnosis by physicians in Louisiana, but in view of the rather characteristic clinical picture and blood picture of this disease, and the relative frequency of infestation as shown by Dr. Hinman's study, one can logically conclude that in most instances, invasion of the human body by these parasites does not result in significant clinical symptoms.

I am sure, however, that the paper of Dr. Hinman and Dr. Kampmeier will cause us to consider trichiniasis more seriously in cases of obscure fever and edemas of undetermined origin, and predict that as a result of their exposition there will be more than one clinical case of trichiniasis in the Charity Hospital records ere many years have passed.

Dr. W. H. Seeman: As a matter of historical interest, I recall the case reported in Louisiana, referred to by the essayist. My predecessor, Dr. Archinard, made the diagnosis from direct microscopic examination, and in that instance badly cooked sausage caused the infestation. For many years we had a sample of that sausage and used it in the Post Graduate School in demonstration of trichina.

I would like to ask Dr. Hinman the method of digestion he uses; also, is it not in the purely agricultural districts, where home slaughtering is done, that one generally finds the disease? Also, is it not true that with the modern methods of curing used in modern plants or abattoirs there is not quite the same chance of infestation?

I have enjoyed this timely paper and think all should watch out for the cases such as may have been missed in the past.

Dr. J. H. Musser: I had the opportunity some years ago of seeing some eleven Italians who had eaten of pork which was contaminated. There was no difficulty whatever about the diagnosis. The first patient who came into the hospital was a typical case of trichiniasis with every clinical manifestation of the disease. The other patients were sought out; we made a trip down to New Jersey and brought all that particular group and pork into the hospital and did a leukocyte count on those who had eaten it and took some deltoid muscle for investigation.

I do not agree with Dr. Hinman regarding the statement that we are overlooking many of these

cases, because a routine leukocyte count is made on patients coming into the hospital. Eosinophilia is so marked in trichiniasis I think it would put the clinician on guard immediately; we would find such extremely high counts.

I think Dr. Kampmeier really had an exceptional experience with these cases. The number occurring in California in a five year period which the essayist cited, shows he certainly had the opportunity of seeing a great many cases.

Dr. I. I. Lemann: Dr. Neugarten tells me that in the last six months in the Pathological Department of the Touro Infirmary two cases of trichiniasis have been discovered in the routine examination of tissues removed at operation.

Dr. E. H. Hinman (In conclusion) I would like to thank Dr. Seeman again for cooperating in providing diaphragms of rats and for his discussion of this paper. Small pieces of diaphragm are taken at autopsy, ground up in a meat chopper then placed in 1 per cent solution of pepsin with 0.5 per cent hydrochloric acid and rotated for five hours. In that way the muscle is practically all digested and just the small pieces of muscle around the capsules are left.

In regard to the incidence, I believe that most of the trichiniasis cases occur in rural districts. The small country slaughter houses are the most important source because there the farmer throws out the refuse from the slaughter, the rats eat it and in turn are eaten by pigs. Around the city abattoir the refuse is destroyed and there is no chance to continue the cycle.

In regard to the Federal regulations, any pork product which is sold and is customarily eaten without further cooking must pass certain requirements, must be kept for several weeks at a high temperature or in refrigeration. On the other hand, the farmers prepare their own sausage by a method which may not kill the trichinae.

All these cases were light infestations and only a small number of capsules were found in the digested tissue. Only one case gave any rheumatic complaints or any muscle complaints whatever; that patient gave a history of rheumatism 24 years before.

Dr. R. H. Kampmeier (In conclusion): I think Dr. Hull's suggestion, about the possibility that many cases occur but not diagnosed because of light infestation, is no doubt correct. Probably only the minority of actually infested patients are found from the clinical standpoint. In reviewing some cases it is impossible to find a suggestion of trichinella infection. At the time I was at Ann Arbor, all tonsils removed were examined pathologically. I recall at least three of my patients in whom trichiniasis was incidentally found in the muscle removed with the tonsils. Upon questioning these persons, I could obtain no history suggesting a trichinella infection in the past.



# MALINGERING\* WITH REPORT OF A CASE

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History has observed and literature has always recognized this condition, which has ever been a problem for those having to deal with neuropsychiatric and medico-legal problems, and is a cause of exasperation to the utmost degree to industrial commissions.

The earliest instance of malingering is recorded in Genesis, 31-35, when Rachael, in 1056 B. C., malingered in order to secure the stolen idols of Laban. "Hamlet", as analyzed, is the classical malingerer. His family history and the etiology of his distress, symptoms of insight, orientation, doubtful hallucinations, delusions and amnesia, ambition, goal idea, emotion and dreams, detective ability, so-called procrastination, discretion, logic and reasoning powers, —all are factors revealing a sanity and direction of purpose.

When this subject is reviewed from every angle, we find that all cases of malingering in respect to nationality, physiognomy, and mentality, present evidence of a trait which supports our findings. It is a weapon which has played a tremendous part in the evolutionary struggle, not only of man, but of all living things, and in a broad sense may be looked upon as an organic function, as an endowment by which the inferior being is able to avoid danger of becoming the prey of the stronger, superior being. In the animal kingdom, for instance, one sees the fox, the opossum, and a host of other creatures, practicing the art to perfection, just as primitive man must have had recourse to simulation in his struggle for existence. Even the gods were given the ability to assume any shape or form to perform miraculous escapades. Jove, for example, transformed himself into an eagle when he carried off Ganymede. Achilles, the son of a goddess, sought to avoid the iniquitous fate which drove him to Troy by disguising himself as a woman.

To the present era of our civilization, decep-

tion is a common weapon of defense with the savage and with the inferior races. Willmanns, in a report of 277 cases of mental diseases in prisoners, cites only two cases of pure malingering. Bonhoeffer, in 221 cases found only 0.5 per cent of malingering; Knecht, in 71½ years at Waldheim Prison, failed to observe a single case. Vingtrinier did not observe a true case among 43,000 at Rouen. Connolly, Ball, Krafft-Ebbing, Jessen, Seemons, Mittenzweign and Scheule say pure malingering is extremely rare. Penta observed 120 cases during his four years' service in the Prison at Naples, though in his opinion, this high percentage he attributes to the type of inmates, they belonging to the Cammora, in which the tendency for deception and fraud is found highly developed.

Malingering among American troops during the World War was found to be small, this, in part, due to the neuropsychiatric surveys conducted by a selected group of neuropsychiatrists attached to the camps, base hospitals and recruiting stations, under the direction of the Surgeon General's Office, aided by the National Committee for Mental Hygiene; likewise, in part, by a system of procedure known as Torpillage, a form of psycho-physiotherapy used in the psychoneuroses, which had a very beneficial and salutary effect in reducing the elaborate plan of the exaggerator to a minimum. Weisenberg's experience also proved that a very small percentage of soldiers examined were malingering. Lewy found simulations rare, exaggerating symptoms common, though these were not disabling.

Malingering may be defined as the deliberate feigning, induction, or protracting of illness, with the object of personal gain.

Today malingering is looked at per se as a morbid entity, and the rarity of cases is attributed to our changed attitude towards this question and by acquiring a real insight into the workings of the human mind. Hence, simulation in the mentally normal is rare.

## PROTOCOL

The case presented is that of a white male, single, aged 23 years, longshoreman at time of alleged disability, referred to be by the Medical Director of a Casualty Insurance Company, under

\*Read before the Louisiana State Medical Society, New Orleans, April 29-May 1, 1935.

whose group came the agency employing the subject, together with report that the findings made by him, including roentgenograms were negative in every respect.

This man came, accompanied by one female and two male companions, using crutches and approaching the entrance to my office walking the entire length of the reception room sideways instead of forward as is customary, dragging his limbs behind him, using the crutches as a means of propelling himself, aided on either side and in the rear by the friends. On the faces of each of these was an agonized expression, painful in appearance, giving one the impression that these mannerisms had been rehearsed.

The history of the family was irrelevant other than to state that the parents were law-abiding Christian people. This had been verified by a reliable source. The authenticity of the remaining history and reliance that should be placed therein could only be balanced by the pathological lying of the subject:

He stated that the early life was uneventful; that there were frequent changes of position as regards vocational employment, denying alcohol and drugs. He likewise denied any Police record or any altercation with civil authorities. He stated that he was employed as a longshoreman on the river front, loading and unloading a steamship which was then in port; that while pulling a truck of freight, he stumbled and fell, striking his back on an object near him, which resulted in his inability to use the lower part of his limbs. He was placed in the hospital and later returned home, following which he visited the office of the Medical Director, who later requested that I make the neuropsychiatric survey and forward my report.

There was much ritual and ceremonial in robing and disrobing, he being assisted by the female companion, with groaning and grunting and marked contortion of the facial muscles during this procedure. As I approached to perform the various tests necessary for this examination, he would make an outcry, even though I had not touched him. When the more strenuous tests were attempted, he was not able, to quote him, to co-operate.

Nevertheless, the examination revealed a fairly well-developed and fairly well nourished white, sallow male. There were punctate scars about the arms and chest and beaded-like elevations along the cephalic veins. These he explained away by having his arms pinched in the door of an automobile during a recent accident. The punctate scars, among which were noticed abscess residuals, were explained away by saying that he had a crop of boils. There were no definite contusions nor

other markings of note about the body. The electrical reactions were all normal, and all tests were normal otherwise. The reflexes were all present and active. FFT FNT performed with precision while seated; failed to co-operate in the KHT, stating that he was unable to stand alone and could not move his limbs. There were no noticeable swellings nor oedemas. No facial asymmetries. Hand-grasps were normal. No impediment of speech, though this bizarre gait as afore-described.

The mental examination revealed an average grade of intelligent white, who was clear and oriented in all spheres and, from impression gained, was a definite constitutional psychopathic personality, the variant type, with pathological lying and narcotism as a predominant factor, added to which was that, in my opinion, he was criminalistic and could be placed in the recidivist group. He was likewise found competent, and that he should be held accountable for his acts, without social dislocation and without economic maladjustability at that time. The subject stated, previous to his departure from the office, that a lawsuit was pending; that he had consulted a lawyer and would demand a certain sum for the injuries he had received, which he knew had ruined him for life.

A report, accordingly, was forwarded to the Medical Director of the Insurance Company, with an added conference in which I stated that the subject had impressed me very strongly as being a malingeringer.

Six weeks following the transmission of my report and my conversation with the confrere who referred the case to me, while reading a morning paper, the caption (in bold headlines), "STORE HELD UP—BANDITS KILLED," attracted my attention, and on reading the article further I found that one of these had been my permanent and total disability subject whom I had examined, and whom, the paper stated, had a police record, was a drug addict and a recidivist.

#### CONCLUSION

While malingering is uncommon, there are instances where it pays. Economic considerations appear to aid its occurrence more closely than they do most anti-social conduct.

The condition is classed as an objective or subjective disorder which the patient invents, with the idea of voluntarily and consciously misleading the observer.

Personality and conduct irregularities, with an added instability, are factors met with in this particular group of abnormals.

There are professional minds which are slow

to appreciate the fact that they are dealing with such problem cases and are misled accordingly.

The untimely and dramatic passing of the man mentioned in the presentation of this paper confirmed the diagnosis.

#### DISCUSSION

Dr. D. L. Kerlin (Shreveport): I was very much interested in Dr. Otis' paper and the report of his case. As Dr. Otis pointed out a malingerer is one who simulates a disease. There is decided difference between a condition of malingering and traumatic hysteria. Traumatic hysteria is when the individual uses his illness as a solution for conflicts existing in his own personality, and for difficulties existing in his environment; malingering is a conscious mechanism and hysteria is an unconscious one. Dr. Otis also pointed out that the condition of malingering is a rare condition. In a recent study of 100 cases of head injury, Dr. Wechsler of New York reported only one case. In most cases of malingering the diagnosis is not difficult.

As pointed out in Dr. Otis' case it is very often true that these individuals overdo their malingering. This is forcefully demonstrated in the case presented by Dr. Otis. This man entered his office with two companions, both attempting to assist him and all assuming expressions of undue concern. The patient wishes to impress and overdoes it; he continued to do so in disrobing and during examination by Dr. Otis. This oversimulation put Dr. Otis on guard.

In the few cases I have diagnosed as malingering, I have often wished to be able to check on the individual when not under observation, but have never had the opportunity to do so. Dr. Otis' case was especially interesting due to the fact that he had the opportunity to do so, thus confirming his diagnosis.

Dr. C. S. Holbrook (New Orleans): I was very much interested in the paper by Dr. Otis, and especially the case report. I frequently see cases where the question of malingering arises, and it is not always easy to confirm the suspicion or the final diagnosis of malingering. Frequently a satisfactory final diagnosis of malingering can be made only after due proof is forth-coming; and prolonged observation, especially when the patient is not on his guard, is required to get the necessary reactions.

It is often simple to determine that an injury or a disease is not an organic lesion. Very frequently at the present time in compensation cases or in instances where insurance or liability are concerned, people present themselves complaining of symptoms entirely out of proportion to the

obvious lesion. Often patients complain of being totally and permanently disabled, when, as a matter of fact, the lesions presented are of little or no physiological significance. One of the questions that presents itself is whether the lesion is organic or not, and that problem is usually not very difficult to solve. A careful neurological examination, with a proper interpretation of the findings, will show whether the organic nervous system is at fault. If there is no organic lesion, then the disturbance presented by the patient is either due to malingering or to the very common psychoneurosis known as traumatic neurosis. The mechanisms are much the same in either case and are the assumption of symptoms for which there is no organic cause. In malingering there is a wilful, volitional, assumption of symptoms with the object of illicit gain. Where the symptoms are not due to malingering but to a traumatic psychoneurosis, the mechanism is somewhat the same except it is not wilfully assumed but is largely or entirely subconscious. However, the object is to gain some unearned benefit. Often cases that can be classified as traumatic neuroses present some tendency to exaggerate symptoms or play them to best advantage; however, this is not malingering in the usual sense of the word, but is a combination of the two.

One is very fortunate when he is able to prove malingering as Dr. Otis did in the case he presented, and it has seldom been my good fortune to have the proof so dramatically presented.

Dr. Gilbert C. Anderson (New Orleans): I shall not take much time as the hour is late and I can add nothing of value to what Dr. Otis has said but there is a subject upon which I should like to speak briefly and that is the question of malingering after head injuries. For a long time there seems to have prevailed in certain quarters the feeling that a man had recovered from a craniocerebral injury when he was ready for discharge from active treatment. That is to say after the healing of the scalp or the cessation of the symptoms immediately following a concussion, contusion, laceration etc. the patient should be discharged from compensation and go back to work. As there are no definite objective signs readily seen many seem reluctant to believe such patients are not wholly and permanently cured. We all know from many reports in the literature and the observations of various men who see such cases in large numbers that certain of these cases are going to present symptoms which can reasonably be attributed to their trauma; such symptoms commonly include headache, vertigo, inability to concentrate, inability to stand fatigue and heat and many others of a more bizarre nature. This is a more or less common syndrome call it what you will—post-



traumatic psychosis or traumatic encephalitis. So many patients from various parts of the country and from various walks of life tell a similar story that is difficult to think they are all malingering. Head injuries are getting more common due to the present methods of transportation and the widespread use of machinery and I believe some adjustment by the carriers of industrial insurance is going to have to be made sooner or later looking to the care of these cases which present post traumatic symptoms over a long period of time. A patient may feel well when sitting about the house or doing minor light jobs and still be unable to stand extremes of heat and fatigue incident to heavy labor.

Dr. Otis (Closing): I have nothing further to add except to thank the discussants, and trust that the presentation of the subject matter will aid others in Medicine in ferreting out the simulator.

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### ACUTE MERCURY POISONING\*

EDGAR HULL, M. D.†  
and  
LOUIS A. MONTE, M. D.†  
NEW ORLEANS

Bichloride of mercury poisoning is by far the most common serious intoxication seen in Charity Hospital, the average incidence being about twenty-five cases each year. About one-fourth of these patients die. Only about half of the patients who take bichloride develop symptoms of mercury poisoning; the mortality of true mercury poisoning is, therefore, about 50 per cent. It is difficult to explain why certain persons who take bichloride develop no symptoms of poisoning at all, while others develop rapidly fatal intoxications. We used to believe that the explanation lay in falsification on the part of the patients, in that many persons claimed to have taken poison, when actually they had not, but analysis of gastric contents on recent cases has shown that we were mistaken. There is a definite correlation between the dose taken and the incidence of symptoms of poisoning, but this is not sufficiently constant to be of value in the consideration of in-

dividual cases. Some patients have died after taking only two tablets, while others who took much larger doses manifested no symptoms of poisoning. There is apparently no correlation at all between the emesis interval or the lavage interval and the incidence of toxicity; apparently the incidence of toxicity and the mortality are just as high in persons who vomit late and receive delayed lavage as in those who vomit almost at once and receive early lavage. The incidence of toxic signs and the mortality are much higher when the drug is taken in solution on an empty stomach than when the stomach contains food or alcohol and when the tablets are undissolved, but again the correlation is not constant enough to be of much value in consideration of individual cases.

Most of the cases of bichloride poisoning follow ingestion; occasional cases are due to the use of bichloride douches or the insertion of a tablet into the vagina; rarely symptoms have developed following bathing in a bichloride solution or taking an enema containing the drug. Corresponding doses of bichloride are much more toxic when administered by vagina than when taken by mouth.

When the ingestion of bichloride of mercury results in mercury poisoning, the early symptoms may be ascribed to the corrosive effect of the unabsorbed chemical upon the stomach and upper bowel, while the later manifestations are due largely to the toxic effect of absorbed mercury.

The early symptoms consist of violent vomiting and diarrhea, often with profound shock, which may be rapidly fatal; we have seen patients die in shock as soon as two hours after the ingestion of the poison. Almost one-fourth of the deaths from bichloride poisoning are due to shock, and occur within twenty-four hours after the poison has been taken. Shock does not occur when the drug is administered by vagina.

Symptoms due to absorbed mercury may occur very early; we have known diarrhea to occur less than an hour after the insertion of a tablet into the vagina. The later symptoms of bichloride poisoning are due to gastritis, enteritis, and colitis (which cause vomiting, diar-

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\*Read before the Orleans Parish Medical Society, April 22, 1935.

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rhea, often bloody, and abdominal distention), and to a necrotizing lesion of the kidneys, which in many instances causes complete anuria. The gastro-intestinal and renal lesions result in profound changes in the blood and tissue fluids, the chief of which are, elevation of the non-protein nitrogen constituents, reduction of chloride, and diminution of bicarbonate (acidosis). Stomatitis is an inconstant lesion, being absent in many severe cases of poisoning. It is an interesting fact that lesions of the gums and mouth are of much more frequent occurrence when the poison has been administered by vagina than when taken by mouth.

Findings on examination of the urine are very inconstant. In some cases, tremendous amounts of albumin are found, and the urine may be grossly bloody. In other cases of just as severe intoxication, the urine may be pale and clear, of a very low specific gravity, and may contain only a trace of albumin and no casts or red cells at all, even though only a few c.c. are secreted each day.

Death may occur early from shock, as mentioned above, or after four days to two or three weeks, from a combination of uremia and the effect of the gastro-intestinal lesions. After several days of complete anuria the secretion of urine may be reestablished and the non-protein nitrogen of the blood may decline, but at this stage exsanguinating hemorrhage from the bowel may ensue.

#### PROGNOSIS

As has been stated, about half of the persons who take bichloride develop mercury poisoning, and about half of these die. The prognosis in a person who has taken the poison at all is, therefore, none too good. The following points, gleaned from a study of the case records of about 400 cases of bichloride ingestion, and from observation of about 150 such cases, may be of help in evaluating the prognosis of individual cases.

The prognosis is very good if less than two tablets (14.6 grains) have been taken by mouth; patients rarely succumb who have taken one tablet or less. This does not hold in va-

ginal administration; one tablet inserted into the vagina often results in fatal mercury poisoning. With increasing dosage the prognosis becomes more grave.

The prognosis is more favorable if the drug is taken undissolved than if taken in solution.

The prognosis is more favorable if the poison is taken shortly after a meal than if taken on an empty stomach.

The early appearance of severe toxic signs bespeaks a poor prognosis. If no signs of poisoning appear for forty-eight hours after the poison has been taken, the outlook is very favorable.

Patients rarely recover from severe early shock.

The prognosis is unfavorable if significant diminution in urinary output persists for more than two or three days. The outlook is extremely poor if there is a period of anuria lasting as long as twenty-four hours.

A total non-protein nitrogen of the blood above 125 mg. per cent, or a creatinine above 3, bespeaks a poor prognosis. If the N. P. N. exceeds 200, or the creatinine 5, the outlook is almost hopeless.

The prognosis is very poor in any severe intoxication. There is nearly always a very sharp line between the mild cases of mercury poisoning and the severe ones. The mild ones show almost insignificant symptoms, while the severe ones exhibit evidences of markedly severe intoxication. There are very few cases which may be said to have moderately severe intoxications. About 85 per cent of the patients with severe intoxications die, and in nearly all of these the intoxication is markedly severe within two days after the poison has been taken. Thus, in most cases an accurate prognosis can be given relatively early in the course of the intoxication.

#### TREATMENT

A large part of research regarding the treatment of all poisonings has been centered about the search for antidotes, and this statement applies in the case of mercury poisoning. During the last twenty years, many substances have been recommended in the treatment of mercury poisoning, some designed to prevent the

absorption of mercury, and others calculated to mitigate the effect of absorbed mercury. There are many substances which convert bichloride of mercury into calomel, but there is no evidence that the administration of any of them is more efficacious than the simple removal of unabsorbed bichloride by the use of the stomach tube. The administration of milk or egg white as an emergency measure before the physician arrives is to be recommended, since this results in the formation of mercury albuminate, which, although absorbable, is not corrosive. Most of the substances designed to prevent the toxic action of absorbed mercury have been sulphur compounds, chief among which are hydrogen sulphide, calcium sulphide, sodium thiosulphate, and most recently sodium formaldehyde sulphonylate<sup>1</sup>. It is extremely unlikely that any of these substances mitigates in the least the toxic effect of absorbed mercury. Sodium thiosulphate has been widely used in mercury poisoning for the last ten years, though the work of Haskell and his co-workers<sup>2</sup>, one year after its introduction by Dennie and McBride<sup>3</sup>, proved its lack of value rather conclusively. In our analysis of the cases referred to above, we found the mortality slightly higher in the cases who had received thiosulphate than in those to whom it was not administered. Our as yet limited experience with sodium formaldehyde sulphonylate indicates that it, too, is probably not of any value<sup>4</sup>; at present we are continuing its use, however. It should be emphasized, therefore, that while these substances are not harmful, and there is no contra-indication to their use, they should not supplant prompt and thorough gastric lavage.

In the case of poisoning with some drugs, physiologic antidotes have been discovered, which, while they do not enter into chemical combination with the poisonous substances, have pharmacologic effects that are antagonistic to the effects of the poisons, and therefore are effective in treatment. Examples are the barbiturates in strychnine poisoning, and the nitrates in cyanide poisoning. There can be no one substance that is a physiologic antagonist to mercury, because of the multiple anatomic

lesions and physiologic disturbances occasioned by its presence in the body, but it would seem that the most logical method of treatment, since chemical antidotes have not proven of value, is to attempt to prevent and combat the physiologic disturbances occasioned by the presence of mercury in the body. In 1933, Peters, Eisenman, and Kydd<sup>5</sup> proposed such a method of treatment. In July, 1932 we had instituted a similar method of treatment in our services at the Hospital, which we modified somewhat after the publication of their paper. The method, briefly, is as follows:

1. Thorough gastric lavage.
2. Measures to combat shock, if it is present. These are the same measures usually used in surgical shock—the use of morphine, the intravenous administration of glucose and saline, and the use of external heat. If shock does not respond to these measures, acacia solution is given intravenously, or transfusions of citrated blood are given. If the patient is in shock when first seen, it is important to delay lavage until measures have been taken to combat shock, for a patient in severe shock may die during an attempt at lavage.
3. The early administration of large volumes of fluid, together with glucose and salt, by parenteral routes, in order to combat dehydration, acidosis, and chloride depletion. During the first two days of the intoxication, about 5000 c.c. of fluid are given daily. The intravenous drip is the most convenient method of supplying fluid.
4. Careful observation of the patient (which includes daily estimations of the total N. P. N. of the blood, blood chloride, and plasma carbon dioxide combining power), and the treatment of symptoms and obvious physiologic disturbances as they arise. Vomiting is treated by gentle gastric lavage and the use of sedatives, diarrhea by the use of irrigations of normal saline and the occasional use of mildly astringent enemata (such as 1 per cent tannic acid), abdominal distention by the same methods used by the surgeon in the treatment of adynamic ileus<sup>6</sup>. Should the blood chloride remain below normal, 2 per cent saline is substituted for normal saline; if the plasma  $\text{CO}_2$



combining power falls below 40 volumes per cent, sodium bicarbonate is given intravenously. In our experience, 500 c.c. of 5 per cent bicarbonate solution raises the  $\text{CO}_2$  combining power about 8 volumes per cent in most patients. Transfusions are given if profuse hemorrhage from the bowel occurs.

The greatest single problem is the decision as to how much fluid to give patients who are secreting very little urine or none at all. The work of Barry, Shafton and Ivy<sup>7</sup> on nephrectomized dogs would indicate that in the presence of complete cessation of renal function, the administration of considerable amounts of water and salt is indicated, but patients anuric from bichloride poisoning regularly develop edema if salt and fluid are pushed, often accompanied by pleural and peritoneal effusions. At present, we feel that in the absence of edema about 3000 c.c. of fluid should be given daily above the amount lost in the stools and vomitus (approximately the amount required by a normal person), and that salt should be given with the fluid if the blood chloride is below normal. If any edema at all appears, the amount of fluid is reduced to about 1800 c.c. daily (the amount lost through the skin and lungs in a normal person) and the use of salt is discontinued. In the presence of vomiting and tympanites all of the fluid is given by parenteral routes; if the abdomen is flat and no nausea is present, most of the fluid is given by mouth.

Between July, 1932 and April, 1934, 33 patients who had taken bichloride of mercury were treated by this method. There were four deaths, a mortality of 9 per cent, which at first glance might speak for striking superiority of this method over those formerly in use. An analysis of the individual cases in the group, however, indicates that the reduction in mortality may be largely, if not entirely, due to factors not connected with therapy at all. For example, only ten of these patients, 30 per cent, developed any signs of mercury poisoning at all. This low incidence of toxicity certainly cannot be due to the treatment employed, for there is no reason to believe that this method of therapy can possibly prevent the occurrence

of toxic symptoms if sufficient mercury is absorbed. We have no statistics, therefore, to prove that the method we have outlined is better than any other method of treatment, but simply present it as a logical plan, considering what is known about the disturbed physiology in mercury intoxication.

#### REFERENCES

1. Rosenthal, S. M.: An antidote for mercury poisoning. *J. A. M. A.* 102:1273-1276, 1934.
2. Haskell, C. C., Henderson, W. C. and Hamilton, J. R.: Sodium thiosulphate in mercurial poisoning. *J. A. M. A.* 85:1808-1810, 1925.
3. Dennie, C. C. and McBride, W. L.: Treatment of arspenamine dermatitis and certain other metallic poisonings. *Arch. Dermat. & Syph.* 7:63, 1923.
4. Monte, L. A. and Hull, E.: Bichloride of mercury poisoning; sodium formaldehyde sulfoxylate as an antidote. *South. M. J.* 27:988-990, 1934.
5. Peters, J. P., Eisenman, A. J., and Kydd, D. M.: Mercury poisoning. *Am. J. Med. Sci.* 185:149-171, 1933.
6. Ochsner, A. E. and Gage, I. M.: Adynamic ileus. *Am. J. Surg.* 20:378-404, 1933.
7. Barry, F. S., Shafton, A. L., and Ivy, A. C.: Experimental edema in nephrectomized dogs; role of water and chlorides. *Arch. Int. Med.* 51:200-206, 1933.

#### DISCUSSION

Dr. Philip H. Jones, Jr.: I think the essayists ought to be congratulated on this presentation of their investigation involving so many cases. It is quite apparent that their experience parallels that of some of the former house officers who dealt with these cases. I think that they have put a little bit more accuracy into the prognosis and given further cause to make prognosis.

It probably seems superfluous to repeat again what the essayist said about the quantity of fluid in the stomach; that seemed to be the most important predisposing factor to recovery that we were able to notice.

He mentioned very little about the surgical treatment of this condition. Those of us who had some experience with the surgical treatment are very much in agreement with him in not mentioning it. For everyone's information, it might be well to recount that we went through several stages—of decapsulating one kidney, then both kidneys, then neither kidney, then appendicostomy—with uniformly bad results.

The essayist mentions the new method of not attempting to use chemical means, but merely attempting to support the patient by all possible processes. This would seem to be the only recourse we have. Accurate figures worked out by experiments on dogs show that the time the dog lives is increased only about 10 per cent by the use of any chemical antidotes.

I think that the subject might be important to

any one of us any time, and for that reason is timely. I very much enjoyed the paper.

Dr. Chaille Jamison: I enjoyed this paper so much and consider it such an excellent paper, that even though I have nothing to add to what the essayist said, I would like to comment on it.

I was very much interested in what Dr. Jones said, also what Dr. Hull pointed out, that we might any time be called on to face this emergency in private practice. One of my patients took a tablet and a half of bichloride, apparently on an empty stomach, and I was astonished that this woman had practically no symptoms at all—albumin and some casts. She got no immediate treatment; it was hours before she came to the hospital.

Dr. Jones also brought up the very interesting surgical work that was done in the hospital. The undertaking of Dr. Hume in testing out Edebohl's operation he did not describe. It was thought that relieving the tension in the capsule would be of great advantage in stimulating circulation, also we would not have to deal with the possibility of vascular changes which would, of course, negative any results on the kidney which might be brought about by depression.

Dr. Ambrose H. Storck: In the several cases of bichloride of mercury poisoning in which I have performed the Edebohl decapsulation operation, as well as in other cases observed following decapsulation or appendicostomy, the end-results have been most disappointing even though in several instances these procedures effected temporary benefit and prolongation of life. Some of these cases might have been successfully tided over the period of acute kidney damage had a procedure subsequently brought to my attention by Doctor Sidney Bliss been used to supplement the operations. Bliss and others have been able to so thoroughly remove metabolites from the blood by repeated lavage of the peritoneal cavity with solutions introduced and subsequently withdrawn through a trocar, that it has been possible to keep animals alive for long periods even after complete bilateral nephrectomy, or blocking of the kidneys by means of injections of uranium salts. It has been found that following repeated peritoneal lavage not only are excess nitrogenous metabolites removed, but such a pronounced washing out of normal minerals occurs that it is necessary to replace these elements. The intestinal distention frequently present in bichloride of mercury poisoning would at times certainly make peritoneal lavage inadvisable, and the danger of causing diffuse peritonitis in cases in which appendicostomy had been done would probably preclude its use under these circumstances.

From experimental studies undertaken to determine whether digital compression of the duodeno-

pyloric junction during gastric lavage is of value in preventing the passage through the pylorus of bichloride of mercury in solution or in the form of particles, it appeared that such a procedure, performed through a small incision, is unnecessary and of no practical value because a pronounced pylorospasm spontaneously occurs following ingestion of bichloride of mercury. However, in the course of these studies several interesting collateral observations were made. Following ingestion of bichloride of mercury in tablet form, large particles of the tablets surrounded by or mixed with tenacious mucus were frequently vomited after relatively long periods, although these same tablets had the property of almost instantaneously dissolving when placed in tap water. In vitro, tablets placed in the mucus were found to disintegrate and dissolve very slowly. From these observations, as well as from the roentgen ray demonstration of the slow disintegration of the tablets in the animals' stomachs, it seems that in clinical practice it would be advisable to induce emesis before washing away the mucus surrounding the tablets with the solution used for gastric lavage.

Individual variations in the quantity and quality of mucus and other normal gastric secretions in human cases quite likely plays an important role in influencing the amount of fixation and absorption of mercury salts, and these factors, like the presence or absence of food in the stomach at the time of ingestion, are probably important in determining the outcome in bichloride of mercury poisoning.

Dr. Louis A. Monte: In reviewing and studying a large number of case records of patients admitted and treated in the Charity Hospital it was interesting to find that about sixty per cent of the total number represented white females, by far the majority of these being very young women. The reason for attempted suicides predominating in this group hardly needs explanation.

Irrespective of any special method in the treatment of bichloride of mercury poisoning the influence of fluid intake on mortality was rather significant in the toxic cases which we divided into three groups according to the quantity of fluid received per twenty-four hours (orally and parenterally). In one group where the fluid intake was 1500 c.c. or less, the mortality was 75 per cent. A second group with an intake of 1500 to 2500 c.c. showed a mortality of approximately 50 per cent. The third group, receiving 2500 c.c. and over, was represented by a mortality of 25 per cent. We believe these findings are conclusive in estimating the value of forcing fluids and especially should the administration be begun early in the intoxication.

The use of sodium formaldehyde sulfoxylate as an antidote was tried by us following Rosenthal's

publication in April, 1934. Following quite extensive animal experimentation Rosenthal administered the antidote to ten patients who had ingested mercuric chloride. All ten recovered and of the ten only a few of the patients manifested any toxicity at all, and in these, the toxic symptoms were apparently mild. Following the procedure used by Rosenthal, we treated seven cases with sulphyxylate. Four patients developed severe intoxication and of these, three died. Thus far we have not found the antidote to be of any value.

Surgical intervention in the treatment of acute mercury poisoning has been of no benefit in the six cases where operative procedure was instituted. In one patient cecostomy alone was done; in four patients, unilateral decapsulation and cecostomy; and in one patient, bilateral decapsulation. All six patients succumbed to the toxic action of mercuric chloride.

Dr. Edgar Hull (In conclusion): I wish to thank Dr. Jones, Dr. Jamison, and Dr. Storck for their discussions and comments, and to close with these few remarks:

About twenty years ago, Sansum, on the basis of observations made on experimental mercury poisoning in dogs, came to the conclusion that the prognosis in this intoxication depends upon only one factor, and that is the amount of mercury absorbed. Our experiences indicate that his conclusion still holds good, that no methods of treatment proposed up to this time have any great effect upon the mortality of bichloride poisoning. We are fairly well convinced that the low mortality reported in numerous small series of cases is due not to efficacy of treatment, but to the two facts mentioned in our paper: first, that only about half of the patients who take bichloride develop mercury poisoning; and second, that in almost half of the patients who do develop symptoms of poisoning, the intoxication is very mild. The investigator may easily be led to believe that the absence of symptoms or the occurrence of mild symptoms is due to his method of treatment, whereas, in reality, he has simply encountered a group of patients who have not absorbed a lethal amount of mercury. Our present series, for example, would seem to indicate that we had effected a rather striking reduction in mortality, from 25 per cent to 9 per cent, but study of the individual cases indicates that, of the 31 patients who recovered, 30 would almost certainly have recovered if they had been treated by methods formerly in use. Any claim for efficacy of the therapy must, therefore, rest upon the very insufficient evidence of the recovery of a single patient in whom the intoxication was markedly severe.

The work of Bliss, referred to by Dr. Storck, suggests possibilities for the clinical use of peritoneal lavage, which so far as I know, has not

been reported. We have not used it in mercury poisoning for several reasons: first, when we learned of Dr. Bliss's work, we were already engaged in treating the intoxication by the method mentioned in our paper, and our results at that time looked promising. Second, we believed that the first clinical use of peritoneal lavage should properly be in pure renal insufficiency, and not in a more complex intoxication such as mercury poisoning. Third, it is fairly certain that adynamic ileus contributes considerably toward the fatal outcome in mercury poisoning, and the distended small intestine is often gangrenous. It would seem inadvisable to introduce fluid into the abdomen of a patient whose intestines are distended and gangrenous. Were I to try peritoneal lavage, I would not combine it with decapsulation, however, since I regard the lack of value of this operation rather conclusively proved.

Dr. Storck's suggestion that the induction of emesis precedes lavage of the stomach is a good one. Fortunately, it is rare that the patient has not vomited before he reaches the physician. The possible role of gastric mucus influencing the outcome had not occurred to me; the protective influence of the drinking of alcoholic liquors may well be explained by their effects upon gastric secretion.

As I said before, we do not believe that present day methods of therapy will save any considerable number of these patients, but we might save a few by trying to keep body chemistry as nearly normal as possible.

## TUMORS OF THE MOUTH AND JAWS\*

HAROLD G. F. EDWARDS, M. D.  
SHREVEPORT, LA.

A tumor on any part of the outer surface of the body is an unwanted growth, but when it develops in or about the mouth and jaw, it is a calamity. The face may lose its normal appearance as a result of the tumor, which may reach an enormous size, ulcerate and leave the patient a ghastly spectacle. When in or about the mouth it may interfere with the function of mastication and even swallowing, due largely to the associated pain.

Cancer, if untreated, is a fatal malady which kills annually the young and old, the poor and the rich, the king and the pauper, the scientist and the ignorant. In the beginning of the cen-

\*Read before the Louisiana State Dental Society, Shreveport, April 20, 1934.



tury, cancer ranked sixth as a cause of death in the United States, and now it has taken second place, being exceeded only by heart disease.

Certain occupations and habits are regarded as predisposing causes of tumor growths. In many cases irritation and friction of tissues, chemically, mechanically, or thermally, have proven sound theory as a causative factor for a tumor beginning in or about the mouth or jaws. Trauma and constant repeated injuries from broken or roughened teeth, or from ill fitting dentures, have repeatedly been observed to be starting points for cancer.

Tumors of the mouth and jaws usually arise from two types of tissue; the connective tissue and epithelial tissue. In the connective tissue group are the epuli, or fibrous type, the angiomatous type, the endotheliomatous type, the giant cell tumor type and the sarcomas. In the epithelial tumors are epidermoid carcinomas of lip, tongue, buccal mucosa, floor of mouth, gums, palate and the adamantinomas.

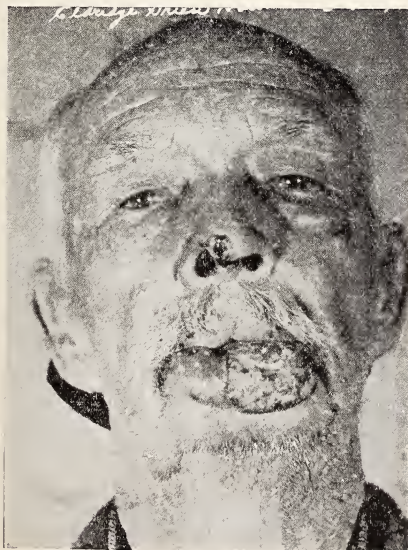


FIGURE 1A

Case Clinic No. 1173—Advanced epidermoid carcinoma of lip, with skin carcinoma of nose and upper lip, treated with interstitial platinum radium needles into lower lip and with intensive low voltage roentgen ray treatment to nose and upper lip.

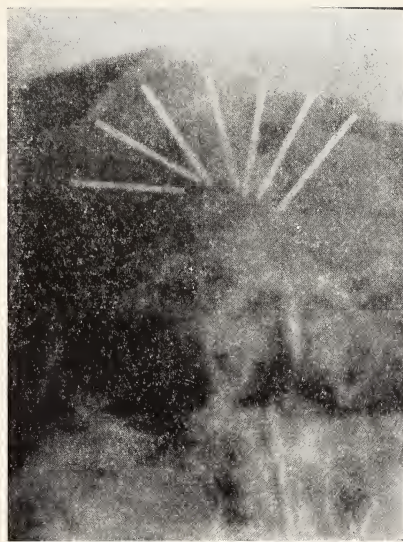


FIGURE 1B

Showing platinum radium needle in lower lip in case 1173.

Cancer of the lip is probably the most frequent tumor about the mouth, it occurs most frequently in the male, and nearly always a careful history will reveal the causative factor as being a jagged tooth, a pipe smoker, a close cigarette or cigar smoker. Usually starting as an insignificant sore on the lip which does not heal and most often which the patient has caused to become worse by the application of some form of medication, the sore takes on a rapid rate of growth.

Cancer of the lip, if taken early before the glands and lymphatics draining this area are involved, should be readily eradicated. In the early cases the writer prefers to use intensive low voltage unfiltered roentgen rays, administering a total of 4000 r/o to the lip, with high voltage roentgen rays to the drainage areas. In cases which are of long duration or which have been previously treated, the treatment of choice then turns to interstitial radium needles, supplemented with high voltage roentgen rays or a radium collar to the drainage areas. All form of treatment directed to destroy the cancer cells must first be preceded by proper dental hygiene.

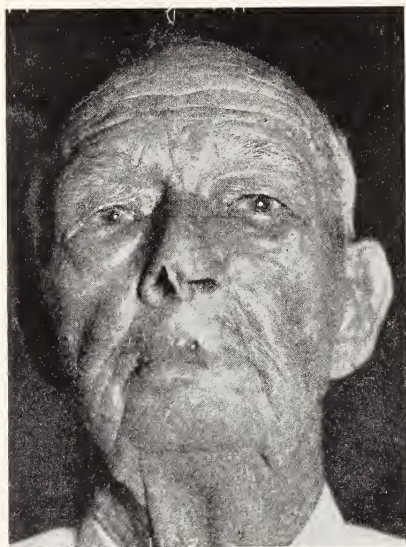


FIGURE 1C  
End result of case 1173

Adamantinomas are tumors arising from the paradental epithelial debris, and appear as solid or cystic growths located within the alveolar borders. The cystic tumors may be unilocular or multilocular and penetrate into the cancellous tissue. Calcified particles, remnants of imperfect enamel may be scattered throughout the tumor. The solid tumors are as a rule, more cellular and malignant, and in the early stage may project from the alveolar border as an epulis. The ordinary epulis, however, does not distend the jaw.

The tumors occur chiefly in adults, and is a prolonged process. A history of extraction of a carious tooth usually precedes, by some years, the appearance of the tumor. The lower jaw is the chief seat of cystic tumors, while the upper yields most frequently to the solid and malignant forms.

All the cysts and tumors are of slow growth. The superficial growths and small cysts can usually be readily removed, but the deep multilocular cysts recur persistently and often require the removal of maxilla. The adamantinomas of the upper jaw are much more seri-

ous, and the solid type recur locally invading the antrum orbit and nasopharynx.

The treatment of adamantinomas of either growth requires a complete removal of the primary foci if a cure is to be expected. Surgical removal, curetting carefully to remove all remnants, followed by cauterization about completes all that can be done for this group of growths.

#### EPULI

All true epuli have their origin from the periosteum of the alveolar process. They are usually circumscribed and may be either sessile, attached by a broad base; or pedunculated, attached by a peduncle. They are covered by mucous membrane except where ulceration takes place due to trauma and the resultant necrosis occurring with infection. They are essentially all connective tissue tumors, and may be divided into four different types:

- (1) Fibromata, which are the most common.
- (2) Angiomata.
- (3) Endotheliomata, which are rare.

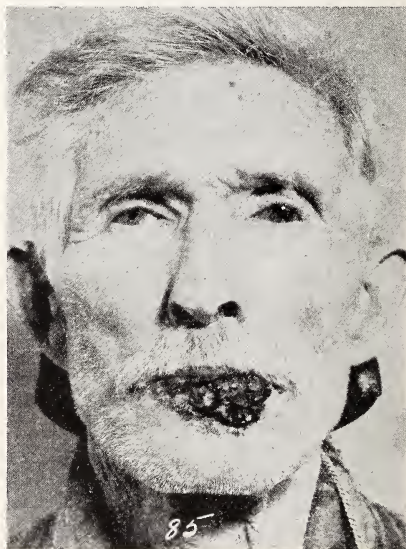


FIGURE 2A  
Clinic case No. 85  
Squamous carcinoma of lower lip treated with  
interstitial platinum needles.



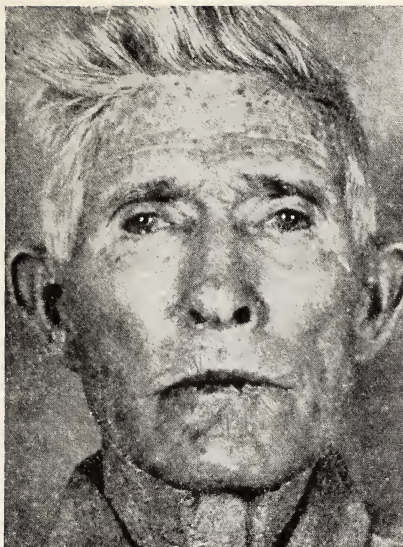


FIGURE 2B

Final result in clinic case No. 85

- (4) Giant cell tumor, which is next most frequent after fibromata.

#### FIBROUS EPULIS

The fibrous epulis, which has already been called the most common, has its origin in the molar and bicuspid regions most frequently either in the upper or lower jaw. It may appear as a hard nodular mass between the teeth or pushing the teeth out, displacing them and later loosening the adjacent teeth. It may be sessile or pedunculated. The mucous membrane covering is quite smooth and about the color of normal mucous membrane although it may be slightly redder. It varies very little from the normal mucous membrane unless ulceration has taken place due to trauma or infection. These are very slow growing processes, increasing very little in size in months or years.

Microscopically, this tumor is composed of normal covering of squamous epithelium, containing an interlacing network of fibrous tissue with round cell infiltration. Occasionally, there

is myxomatous degeneration of bone formation.

#### ANGIOMA

In contrast to the fibrous epulis, the angiomatous form is usually more soft and spongy in character, more vascular, is sometimes a dark red color, bleeds more easily, and grows more rapidly. It may be either sessile or pedunculated. It is covered by normal squamous epithelium. Upon section one sees a large amount of interlacing fibrous tissue with numerous dilated capillary blood spaces. Its origin is the same as that of the fibroma. Sooner or later it may ulcerate with secondary infection. It has more of a tendency to recur, upon removal, than has the fibrous type.

#### ENDOTHELIOMA

The endotheliomatous form of epulis is extremely rare, fortunately so because it is more tenacious and has a tendency to recur more often, after incomplete removal. It is softer than the fibrous type, is covered by a mucous membrane that is quite red, ulceration may have



FIGURE 3

Case Clinic No. 1052—Showing typical angiomata type of epulis.





FIGURE 4  
Typical fibromata type of epulis. Case No. 194.

taken place and upon section one sees the fibrous core with the normal mucous membrane above with strands of endothelial cells proliferating from the linings of the blood vessels.

#### GIANT CELL TUMORS

The giant cell epulis or the giant cell tumor is the second most common tumor of the jaw. It grows slowly but faster than the fibrous type. It becomes quite large in the course of several years. At first, it is not ulcerated but when it attains some size, which is usually the case, it ulcerates with secondary infection causing quite a foul odor. It may be attached to the jaw bone by a broad base (sessile type) or by a peduncle. It is about as firm as the fibrous type—certainly more firm than the angioma and the endothelioma. It is cauliflower in shape and is covered with smooth, soft, dark red or purplish surface unless ulceration has taken place with secondary infection. Then it will bleed quite easily and there will be the added local signs of an inflammatory condition with ulceration and the base will be covered with a grayish-brown exudate. Upon section one sees a normal mucous membrane plus a

fibrous tissue structure in which there are interposed numerous giant cells of the foreign body type, meaning giant cell with numerous nuclei located in the center. This type should never be called sarcoma, as it frequently is because its only malignant characteristic is its tendency to recur after removal. It does not metastasize or exhibit the other characteristics of malignancy. This tumor rapidly displaces the teeth. This type of tumor varies considerably in consistency, occasionally containing cartilage and bone. Before its physical manifestation, the patient may present the symptoms of a neuralgia or toothache. Sooner or later the tooth or teeth may become loosened or lost, after which the various types of tumors will manifest the various physical properties enumerated.

#### TREATMENT OF EPULI

These tumors can be cured by a radical removal,—excision, either with knife or endotherm, thoroughly curetting the base. The reason for the recurrence is that the origin—periosteum of the alveolar process—is not erad-

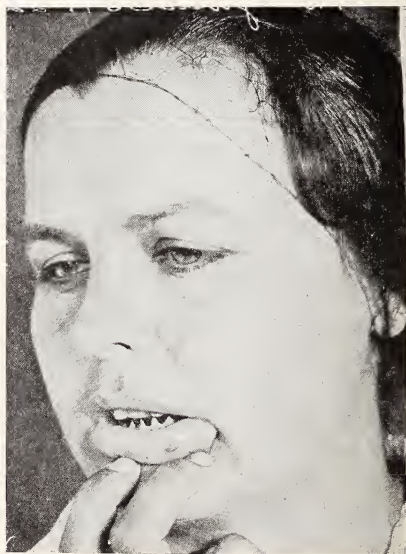


FIGURE 5  
Typical retention cyst of mucous membrane of lip. Case No. 1126.

icated. If their base of attachment to the periosteum and alveolar ridges is removed, there is no danger of recurrence. The angiomatous type is quite prone to recur and the use of radium in these cases will frequently bring about a complete cure.

#### ODONTOMAS

The other benign tumors which may arise in the jaws are the odontomas. The odontoma may be defined as a tumor which arises from the special cells concerned with tooth development. They may manifest themselves as a single cyst, multilocular cyst, fibrous or calcified tumor, or a combination of the foregoing tissues. These tumors are benign in nature and arise from the dental epithelium. They occur most frequently at the age in which the permanent teeth make their appearance. Whether they be cystic or solid tumors, they grow at the expense of the alveolar processes, expanding the jaw and practically eroding away the external or lateral portion from the alveolar process. Even the lateral part of the alveolar process becomes so thin that it imparts an egg-shell cracking or a celluloid cracking upon palpation. The patient usually complains of only a swelling in the molar or mandibular region which increases in size very slowly to the point that the tooth becomes loosened or fails to be erupted at the normal time. After the process erodes away the lateral portion of the alveolar process if the tumor be cystic, it may be ruptured with a discharge of fluid, which is rather viscid and brownish. Infection may take place, obscuring the condition.

#### TREATMENT

These tumors are ordinarily dealt with by local removal, being sure that the entire dental epithelium and the sac of the cyst is removed. More recently there has been a marked trend to treat the multilocular bone cyst in any part of the body with radiation therapy. This method is especially valuable where the cysts are large and involve practically all of the jaw.

#### RETENTION CYSTS OF THE MUCOUS MEMBRANE OF THE LIPS

These lesions are millet-seed to coffee-bean sized, slightly elevated, bluish-gray, rather

tense, freely movable cysts situated in the mucous membrane of the lower lip usually opposite the left cuspid tooth. They contain a thick, glairy viscous fluid which reforms after removal unless the sac is destroyed. It is thought that they are induced by trauma and Sutton found they consisted of dilatation of one or more of the labial glands of Sebastian.

Treatment. Destruction of the sac may be accomplished by surgical removal, with the scalpel or electrocoagulation, either of which must be thorough. Occasionally roentgen ray therapy will be of value.

Peripheral fibromas in the oral cavity may occur on the tongue, lips, cheek, gums or palate, appearing as a well-defined slow growing tumor, usually causing no pain or other symptoms but sometimes interferes by its size, with speech or eating.

On oral surface the fibroma grows slowly forming round or nodular tumors. It is covered by epithelium or normal color. It may be pedunculated or sessile, hard or soft. These arise, as a rule, from the submucosa or subcutaneous tissue when soft and from the outer layers of periosteum when hard. Both are benign tumors.

Treatment of fibromas of either type is surgical removal with the scalpel or best with the endotherm.

Leukoplakia buccalis is a disease characterized by the occurrence on the inner sides of the lips and cheeks, and on the dorsum and edges of the tongue, of sharply outlined, dull-whitish, slate-colored or silver-white points, disks, streaks, bands, ribbons or patches of irregular shape, either flattened or slightly elevated above the level of the mucous membrane.

When closely examined these lesions are found to be made up of hyperkeratinized epithelium and are removable only by artificial measures. The lesions are rough to the touch, and as a rule, not tender. The lesions are extremely chronic in development and are very resistant to the action of all typical medications.

There is a large number of these benign cases which finally result in the formation of Squamous carcinoma, and the treatment of the benign lesion is, therefore, a matter of great

consequence. The syphilitic lesions can not be distinguished clinically from the other types.

Numerous causes of this condition have been suggested. Unquestionably, the irritation produced by tobacco, whether used in chewing or smoking, and the influence of carious teeth and improper fitting dentures, irritating the edge of the tongue or buccal mucosa are most important. More recently Vitamin A deficiency has come into prominence as a causative factor.

The treatment of leukoplakia buccalis is first directed towards removing all local irritants; tobacco, highly spiced foods, by the care of the teeth and dentures and by the use of mild lotions, such as: Potassium chlorate, Tr. Ferri Chloride, Boral, etc. Destruction or removal of the lesions may be accomplished by the use of chemical or electric cauterization or even surgical removal. In selected cases the application of Beta Rays from radium will give prompt results.

#### MALIGNANCIES OF THE JAW

Carcinoma and sarcoma are found in the jaw, carcinoma being the more frequent. Carcinoma is found in the cancer age and it is always secondary to that of carcinoma elsewhere in the buccal cavity. The carcinoma which occurs here is of the squamous cell type, being

manifested as either the papillary or the ulcerative type. Its clinical course is the same as carcinoma of the buccal cavity and the lip, metastasis usually takes place to the same side as the primary lesion. Quite frequently carcinoma of the jaw apparently arises in the antrum or maxillary sinus. The patient usually goes to a dentist because he thinks he has toothache. When the tooth is extracted, it is a normal looking tooth. The socket will not heal, there will be a serous ooze and hemorrhage from it and the malignancy will erode through the floor of the antrum, and present itself in the buccal cavity. If it arises in the antrum, it may be mistaken for an infection there. Sooner or later, however, it manifests itself by deformity, the deformity depending on the direction in which the growth occurs.

Treatment. The treatment was formerly radical resection of the jaw, with the local removal of the regional lymph glands. The upper jaw being a more favorable site for cure than is the lower jaw, due to the fact that metastasis here takes place much later. Today however, many startling cures have been accomplished by the modern Coutard method of intensive high-voltage roentgen therapy. This form of treatment causes no deformity of the facial contour.



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## MEDICAL ECONOMICS

The problems of medical economics keep on agitating the doctor as well as others who come in contact with medicine in its broadest sense. Undoubtedly there is reason for the doctor being disturbed. Certainly a concerted effort is being made by certain groups of individuals to force the medical man into state medicine. Just a few days ago headlines in the New York Times stated that a distinguished visitor from Europe, a former Minister of Public Health in Austria, contended that the doctor should be paid by the state as

is the judge or the school teacher. Certainly no physician would object to receiving the salary that a judge gets yearly nor would he have any valid reasons to feel annoyed if his work should be cut down to that which is done by the average judge. Unfortunately a comparison between a judge, a school teacher and a doctor is at best a poor one. There is absolutely no linking up of the three professions in any way. A doctor leads a life totally different from that of either of the other two types of professional men. This is so obvious it hardly needs comment. Other advocates of so-called state medicine would not be as liberal as this speaker, neither in their monetary rewards to the physician nor would they permit him the authority over, and the control of, his patients that a judge has with litigants.

Meanwhile doctors are attempting, by various schemes, to devise a formula whereby the care of the indigent and the low income group will be complete, whereby the doctor will be rewarded adequately for his services, and whereby he will have, as is only right, just and proper, the control of the medical care of the people entrusted to him. As an indication of the thought that is being given to this subject, of the efforts that are being made by physicians to solve this problem, it is stated that in the offices of the American Medical Association there are over two hundred prepared plans for the care of these groups, many of them in use. These preliminary efforts will certainly result in the evolution of several plans which should be beneficial to the large urban communities or to the smaller rural sections. No one plan seems to be suitable for both rural and urban practice. At the present time the so-called Washington Plan seems to be most popular. However, it should be pointed out that this Washington Plan represents merely an intelligent bringing together of social agencies, hospitals and physicians to care for the poorer portions of the population. It is a plan which requires a considerable income to maintain and one which necessitates the employment of a considerable number of professional and lay assistants.

Out of this welter of tentative schemes and

plans for the care of a considerable section of the American people there will come eventually light. One definite feature has evolved, which is that pre-payment insurance schemes on a voluntary basis will not be taken up by the people of the low income group. This idea has proved itself also to be wrong in other respects. The most satisfactory arrangements so far evolved have to do with post-payment, on the installment plan, of doctors' charges. Such adjustments made for the remuneration of the physician by this method have proved satisfactory both to the physician and to the patient.

### ASTHMA AND SINUSITIS

Cooke and Grove\* bring out the fact that infective asthma is an extremely common condition. They are particularly interested in a study of the relationship of this condition to sinusitis. Believing that sinus disease plays an important role in the production of the condition they studied intensively 248 cases of this disorder in patients in whom the asthma had begun after the tenth year of age. In 92 per cent of this group they concluded that sinusitis was an etiologic factor. Infective asthma, they contend, is the result of allergic reaction to bacteria or their products. They substantiate this by saying, that in spite of the fact that cutaneous reactions to vaccine were unreliable, in this group of individuals with infective asthma, associated allergies existed, there was an eosinophilic exudate from the nasal smears and asthmatic symptoms could be reproduced through injections of autogenous vaccine.

Particularly important in conjunction with infective asthma and sinus disease are the results obtained by surgical intervention of the sinuses that are infected. In 70 per cent of the cases the patients were improved but Cooke and Grove stress the fact that 86 per cent of those individuals improved who had had complete surgical treatment, whereas those in whom the treatment was not so extensive the improvement was only 39 per cent. The immediate

effect of operative procedures is not spectacular but gradually improvement progresses until ultimately the result is splendid.

There are many competent medical men who are loath to advocate extensive operative procedures on the sinuses. The results obtained by a distinguished and careful observer such as Cooke would rather indicate that those who have this belief are in error. Certainly in such an aggravating condition as infective asthma if improvement can take place in such a large group of patients as indicated in this article, the opponents of sinus operations would hesitate not to advise complete and thorough operative treatment in those who give evidence of sinusitis and who have asthma which is not due to pollens, horse dander, foods, feathers or any of the usual allergens susceptible to proof by skin reactions.

### THE DEATH RATE OF NEW ORLEANS

For the 49 weeks that have been reported, and for which figures are available, from the Bureau of Census, there is a slight increase in the death rate for New Orleans contrasted with 1934. So far this year the rate has been 16.2 as contrasted with a rate of 15.8 in the preceding year. The increase has been about equal between the two races. Last year the white race death rate was 13.9 and this year 13.6, whereas the negro rate in 1934 was 22.3 and for 1935, for the weeks that have elapsed so far, is 22.5.

Again it should be stressed that these reports of the death rate for New Orleans are by no means a good criterion of the health of the city. With the enormous number of patients in Charity Hospital sent in from outlying Parishes, ultimately many of them to die, the rate necessarily is unfair to the city. Other cities with very large death rates are probably also in the same position as New Orleans, whereas cities with lower death rates, such as occur in South Bend, where the rate is 8.2 or Flint with a rate of 7.8 the figures represent truly the deaths occurring in the city only of the citizens of that community. Likewise in studying these figures it is noted that in every city in which the white and colored death

\*Cooke, R. A., and Grove, R. C.: Relation of Asthma to Sinusitis, with Special Reference to the Results from Surgical Treatment, *Arch. Int. Med.*, 56:779, 1935.

rate was reported separately the white death rate is on a parallel in the most part with those cities where there is no separation of races due to the fact that such cities have a very large

white population and few negroes. Invariably and always the negro rate is very much higher than is the white rate where the segregation of the statistic of the two races occurs.

## HOSPITAL STAFF TRANSACTIONS

### TOURO INFIRMARY

The regular monthly meeting of the Touro Infirmary Staff was held Wednesday, December 11, 1935 at 8:00 p. m. In the absence of Dr. Henry Blum, Chairman, Dr. Jeff Miller presided.

The first order of business was the clinical pathological conference conducted by Dr. John Lanford, the cases being discussed by Drs. Heninger, Lemann and Wirth. Photomicrographs of the pathological tissues were shown.

Dr. Howard Mahorner presented a case of hyperthyroidism complicated by carcinoma of the rectum. This was discussed by Drs. Storck, Lemann, Lanford and Jeff Miller.

An interesting patient was shown by Drs. Pitkin and Polmer, who also showed motion pictures of this patient. The patient had an anastomosis between the facial and spinal accessory nerves.

Willard R. Wirth, M. D.

### HOTEL DIEU

The regular monthly meeting of the Staff of Hotel Dieu was held in the Nurses' Lecture Room of Hotel Dieu on November 18, 1935, at 8 o'clock p. m. Dr. Val H. Fuchs, President, presided.

Dr. P. Graffagnino presented a case report, "Possible Ectopic Pregnancy". Mrs. T. D., aged 52 years, was admitted to Hotel Dieu on September 17, 1935. Present Illness: On September 15, patient had pain in the lower right abdomen. This pain was associated with some nausea and temperature. Temperature has increased in severity from the day of onset. Highest elevation was 101°. She had a similar attack one and a half years ago.

Past Illnesses: Essentially negative. Marital History: No pregnancies; no miscarriages. Menstrual History: Regular, 28-day type, until about 1931, at which time, menstruation became very irregular, menstruating as often as three times in one month and lasting six or seven days each time. This irregularity gradually diminished two years ago when patient completely stopped menstruating and has not menstruated since. Operations: One (dilatation and curettage and insertion of pessary).

The patient has been treated for high blood pressure for the past five years. She consulted me in November 1931 for the irregularity of menstruation and at this time I found a nodular and irregular uterus, making a diagnosis of small uterine

fibroids. The patient was advised that an operation would be necessary if the irregularity continued. On September 17, 1935, at 11:15 p. m., patient was admitted to Hotel Dieu, having been sent by her physician with a diagnosis of an acute appendicitis.

On admission, abdominal examination revealed marked tenderness and rigidity of the lower right quadrant with a temperature 101°, pulse 80, respiration 24. Vaginal examination at this time showed marked tenderness and rigidity in the lower right quadrant but no masses were palpable.

Because of these findings, an emergency operation was decided upon, the patient taken to the operating room and under spinal anesthesia with 220 mg. of novocain, given between the second and third lumbar vertebrae, a right rectus incision was made and on opening the peritoneal cavity, a small quantity of blood-tinged fluid escaped. The appendix was next sought and found free from adhesions but showing evidences of subacute inflammation—apparently peri-appendicitis. Further exploration was next made of the pelvis and on the right side, a gangrenous-like hydro-salpinx was found with a marked torsion of its inner third. The tubal mass was next removed and bleeding points ligated. As the right ovary was not involved, it was not disturbed. The left tube and ovary showed no involvement. The uterus was in the anterior position and on the fundus a small fibroid about the size of a pigeon's egg was present. As no other tumor masses could be palpated, a myomectomy was performed. The appendix was also removed and the abdomen closed in the usual manner without drainage. The tentative diagnosis was torsion of hydro-salpinx with hemorrhage into the lumen, peri-appendicitis and fibromyoma of the uterus. Patient was discharged on September 29, 1935, making an uneventful recovery.

This case was discussed by Dr. M. Couret, who bore out the laboratory diagnosis of "Tubal Pregnancy".

Dr. Joseph A. Danna presented "Toxic Goitre with Cardiac Complications". I have in the house a patient who is forty-eight years old and who has been suffering with toxic goitre symptoms for a number of years. She has a bad heart, coming in with the diagnosis of auricular fibrillation. She also has a liver that is four inches below the costal border and a big spleen easily palpable.



When I was called in to see this patient I thought this a problem sure enough. The attending physician called in a well known consultant in internal medicine and he advised surgery. I told them that I would bring her in Hotel Dieu, make the necessary examinations and see what we could do. If we could build the patient up sufficiently, we would do something for her. She had been taking iodine and had had roentgen ray therapy. She was then taking digitalis. Plummer of the Mayo Clinic has repeatedly called attention to the fact that patients who have taken digitalis previous to operation do badly afterward. That was another complication in the picture. At Crile's Clinic they found that in old patients with thyrotoxicosis the albumen-globulin ratio was modified with a diminution in the globulin in proportion to the albumen. In order to overcome this the patient is given a blood transfusion and such patients did very well after operation. This patient also had a very sensitive stomach, could not eat very much and would vomit very readily and had abdominal colic that she complained of very much. Strange to say, transfusion cured the colic. We stopped the digitalis first thing and put her at rest. Her general condition improved after stopping the digitalis. We transfused her and about three days after transfusion did a double ligation. She had a stormy time after ligation and I was afraid that she would do very badly. We are having a hard time to have her take nourishment. We gave her hypodermoclysis and during the day of the ligation we gave sodium iodide intravenously and two or three 31 gr. doses every day since the ligation. I am reporting this case because of the various features in connection with it and to show how sick a patient we can deal with. Cardiac disease is not a contra-indication in these cases.

This case was discussed by Drs. Anderson and Landry.

Dr. C. J. Tripoli gave a very interesting talk on "Amebiasis, Differential Diagnosis, Pathology and Phases of Treatment" accompanied by lantern slides. Discussed by Drs. Jamison and Danna.

Executive Session then followed and the meeting adjourned.

#### J. T. NIX CLINIC NEW ORLEANS

At a meeting held in December, Doctor J. A. La Nasa presented the following paper.

##### INTERPRETATION OF HEMATURIA

The etiology and treatment of hematuria continue to present to the average physician numerous baffling questions. Is the bleeding due to some systemic disorder or to some lesion or lesions in the genito-urinary tract? The solution of the problem as to the source of the bleeding, in some cases, is a very simple one, while in others it may

require a very careful and complete physical examination, combined with every diagnostic resource at our disposal for the localization of lesions in the genito-urinary tract.

In discussing this subject it is probably best to consider the systemic causes and the genito-urinary causes separately. However, only mention will be made of the systemic causes, namely: the leukemias, hemophilia, polycythemia vera, purpura hemorrhagica, scurvy, Hodgkin's disease and vicarious menstruation.

##### DRUGS

Several drugs administered over a sufficiently long period of time will cause hematuria. Turpentine, cantharides, phosphorus, insulin, quinine and sodium salicylate, have been reported as causing hematuria. Morphine and various sedatives, such as phenobarbital, will cause red blood cells to appear in the urine if used over long periods of time in patients with nervous disorders.

##### FOODS

A diet rich in proteins will cause red blood cells to be found in the urine. Foods with a high percent of oxalates such as rhubarb and artichokes, by producing an oxaluria, sometimes cause frank hematuria. This type of bleeding, however, is usually associated with some burning and scratching of the urethra.

##### DISEASES OF THE ORGANS IMMEDIATELY ADJACENT TO THE GENITO-URINARY TRACT

Approximately twelve per cent of cases of hematuria are caused by lesions in structures immediately adjacent to the genito-urinary tract. The most frequent lesions are:

- (1) Carcinoma of the pelvic organs, sigmoid or small intestine.
- (2) Tuberculosis and dysentery of the intestinal tract.
- (3) Inguinal hernia involving a portion of the bladder in the hernial sac.
- (4) Acute appendicitis and salpingitis.

The hematuria produced by acute appendicitis is the result of an acute or subacute glomerulonephritis from a hematogenous infection of one or both kidneys, however, in a small percentage of cases, the close proximity of the appendix to the ureter will allow the infection to be transmitted either by contiguity of the structures or by way of the lymphatics.

##### LESIONS OF THE GENITO-URINARY TRACT

Generally speaking, it may be said, as regards both sexes, that bleeding which occurs at the beginning of micturition has its origin in the urethra. In the male, in these cases, the anterior urethra is the most probable seat of the lesion; but if bleeding is at all severe, there will be in addition, a continuous flow or oozing of blood from the meatus, irrespective of micturition, similar to the continuous flow of pus in acute inflammation

of the male urethra. If the blood appears at the end of micturition, we suspect a lesion somewhere at or near the vesical neck. In elderly men, we should suspect a hypertrophic prostate or a malignant growth of that organ. In younger men, especially with a urethral infection, a terminal hematuria points to an inflammation of the posterior urethra, especially and usually involving the verumontanum, vesicles and prostate.

Vesical sources of hematuria are also simple to detect because of their accessibility to cystoscopic inspection. The most common cause of vesical hematuria is bladder neoplasm whether of the benign or malignant type, next we have calculus, tuberculosis of the bladder wall with ulcer formation and acute and chronic cystitis.

Usually hematuria is a symptom which first suggests the possibility of a bladder growth. This hemorrhage occurs without apparent cause, its onset is sudden, and it disappears as quickly as it comes. The blood appears, usually fresher and not so intimately mixed with the urine as in the cases of bleeding from the kidneys.

Seventy percent of hematuria cases of genitourinary origin are due to lesions in the kidneys or ureters. Ureteritis, ureteral strictures, ureteral calculus and ureteral neoplasms all produce bleeding which is usually microscopic in character with the possible exception of ureteral neoplasms, where, sometimes, massive hemorrhage occurs.

The interpretation of hematuria whose origin is in the kidney is not always an easy task. The multiplicity of causes makes diagnosis very difficult and often times it is only after prolonged study and successive elimination of systemic disorder and lesions in the lower tract that a diagnosis is possible.

The causes of kidney bleeding are:

- (1) Neoplasms of the kidney pelvis or parenchyma.
- (2) Tuberculosis of the kidney.
- (3) Hydronephrosis.
- (4) Polycystic kidney.
- (5) Kidney calculi.
- (6) Infections of the kidney pelvis and parenchyma.
- (7) Movable kidney.
- (8) Small angiomas or fibrous changes in the papillae.
- (9) Embolism and thrombosis of the renal vessels.
- (10) Nephritis hemorrhagica.

Hematuria is a danger signal; every hematuria has a pathologic lesion underlying it; examination for the source and etiology should be made while bleeding is active, if that is at all possible, there should be no procrastination or guesswork; the ultimate diagnosis is made however, by modern technical procedures, principal among which are the urethroscope, cystoscope, ureteral catheter,

roentgenography, pyelography and urography; diagnosis of hematuria requires patience and technical skill, tempered at all times by gentleness.

#### OSCAR ALLEN TUMOR CLINIC CHARITY HOSPITAL NEW ORLEANS

The scientific meeting of December was called by Dr. James T. Nix, Director. The essayist was Dr. C. E. Gorman, who presented the following paper.

#### PRIMARY CARCINOMA OF THE LUNG CASE REPORTS

At the present time there is considerable discussion as to the increase in carcinoma cases. It is undeniable that there is an increase in the number of cases diagnosed and cancer of the lung cannot be excluded for this observation.

In the current literature we find "pro" and "con" arguments concerning pulmonary cancer. Some authors say that there is an actual increase in the number of cases. Perret<sup>1</sup> in 1927 reported from the J. T. Nix Clinic eight cases of primary intrathoracic malignancy, six of which were primary lung cancers. These had occurred over a period of six years, and four of these cases in 1926. Looking up the statistics of the Charity Hospital from 1921 to 1925 he found 105,330 admissions. Among these he noticed that there had been one primary mediastinal carcinoma, two primary mediastinal sarcomas, three primary carcinomas of the lung and four primary sarcomas of the lung. He found at the Nix Clinic that malignancy accounted for 16 per cent of deaths and primary intrathoracic malignancy for 1.7 per cent. He believes that there is an absolute increase of primary lung cancer, basing this opinion on autopsy records. The great pandemic of influenza of 1918, the increased inhalation of irritating gases from automobiles, the dust from roads and streets, imperfect fuel combustion, industrial processes, excessive smoking, are probably factors of importance.

Hunt<sup>2</sup>, a strong advocate of this idea, quotes statistics from the German clinics to corroborate his findings. He denies the views of other authors that the increase can be accounted for by the larger attendance at the clinics, longevity, and finally better diagnoses. His opinion is that the increased number of bronchitis cases, and influenzal infections are the chief causative factors in this increase. Frommel<sup>3</sup>, in France, and others, expressed the opinion that the increased inhalation of gases and dust may have some bearing on the cause. In support of this he quotes forty-one cases of which twenty-nine were subject to dust inhalation. Hunt<sup>2</sup> disagrees with this and says there is no connection between profession and cancer of the lung. In this manner he corroborates the work done by Rostoski, Saupe, and Schmorl<sup>4</sup>, as well as that of Huguin<sup>5</sup>. The lat-

ter examined forty-four cases and found only twelve to belong to occupational jobs with irritating inhalants. The former carried on observations in Schneeberg for three years. The chief occupation is cobalt mining. The population totaled five hundred and sixteen. Of these one hundred and fifty-four were miners. Twenty-one of the latter number died in the three years. Post-mortem examinations were done on these and thirteen had cancer. They did not believe this was due to the dust inhalation but to a combination of several reasons. These were heredity, arsenic content of cobalt ore, radium emanation, and frequent colds.

In examining the literature, we discovered the work of Sailer and Torrey<sup>6</sup>. In their article which was written in 1913 they express the opinion that primary pulmonary cancer is not rare. In proof of this statement they collected eighty-seven thousand, four hundred and fifty-one cases with one hundred and thirty primary cancers of the lung—thus approximately one hundred and fifty-six out of every one hundred thousand deaths are due to primary cancer of the lung. Weller<sup>6</sup>, also in 1913, reported ninety cases of primary cancer of the lung. Therefore, we can see that even as early as 1913 there was discussion concerning the frequency of cancer of the lung. With these data in mind, and the percentage of primary pulmonary cancer of approximately 0.5 per cent for the first two years at the Tumor Clinic, the author is inclined to believe that the increase is relative and not actual. Better roentgen ray technique can now establish a diagnosis which has to be regarded as malignant until proven otherwise<sup>8</sup>. More accurate biopsy sections, a better clinical knowledge, a larger attendance at clinics, and increased consultations between the family doctor and the cancer expert play a role as important as the influenzal and bronchitis infections in the apparent increase in pulmonary cancer. Also, we must not forget the role played by public education. This has done a great deal in regard to dispelling cancer phobia.

The two cases observed at the Tumor Clinic fit the classical picture of pulmonary cancer. It is more frequent in white males of middle age<sup>9</sup>. The greater number of cases are carcinoma rather than sarcoma<sup>10</sup>. Pulmonary carcinoma occurs most frequently in the right lung. There appears to be a predilection for the right<sup>11</sup>. The onset may be insidious<sup>12</sup> or with sudden hemorrhage, pain in the chest, or bronchitis. Occasionally, they have an attack of suffocation with severe coughing at which time they expectorate a small piece of tumor tissue. They generally present cough, weakness, anorexia, loss of weight, fever, dyspnea, hemoptysis and pain. Some few present a dilatation of the veins in the head and neck, due to the intrathoracic pressure, and cyanosis, edema and hoarseness. In most cases the tumor

plugs a bronchus, thus producing an area of atelectasis which is usually manifested by a flat area of percussion, in most cases elicited just below the clavicle<sup>10</sup>.

#### SUMMARY OF THE TWO CASES SEEN AT THE TUMOR CLINIC

Case No. 139,557. J. E., a well developed, slightly emaciated colored male, forty-three years old, admitted February 14, 1935. His chief complaint was discomfort and swelling in the chest. The present illness dated back to November, 1934, when he was admitted to the hospital with malaria and vague pains over the body. Shortly after his discharge, December 11, 1934, the pain settled in his chest with expectoration of a whitish sputum. He lost twenty pounds in weight since November. A small area began to pulse on lower left ribs which was painful. Remainder of history was irrelevant. Biopsy showed external lesion to be hypertrophic hemangioma. Diagnostic roentgen ray of February 19, 1935, reports, "Displaced trachea to right and abnormal shadow in right hilar region" which is clearly indicative of a bronchogenic carcinoma. View of the chest shows the consolidation of the right lung entirely cleared with the exception of the hilar zone. From December 18, 1934, to July 8, 1935, the patient received eight thousand and four hundred units of roentgen ray to the upper right lung posteriorly and anteriorly. The average dose was four hundred r units. No positive tissue could be obtained from a bronchoscopic examination which was done on April 29, 1935. Further roentgen rays were then ordered which reported the same findings as previously. An abstract from the progress notes from admission to date show such as:—"Feels better—picking up weight. Holding his own—no loss in weight. Roentgen ray shows consolidation and evidence of collapse. Dense pleural adhesions. Left lung clear." "Patient gained weight, coughs less and feels better."

The last two quotations were from December 3, 1935. Therefore, clinically the patient is showing signs of improvement. The roentgen ray, on the other hand, reports findings of extension. The ultimate outcome of this case is to be seen.

Case No. 104,800. E. W. B., a moderately well developed and well nourished white male, forty-seven years old, admitted January 9, 1934, complaining of pain in right shoulder. The date of onset of present illness was two years previous when he suffered an attack of influenza which necessitated his staying in bed seventeen days. Since that time he has suffered with pain in his shoulder constantly, but it is more intense lately. During the past six months he has been receiving deep roentgen ray therapy to the shoulder. General health impairment. Unable to work, loss of weight, 3 pounds, in last four months. Anorexia past three weeks, hearty appetite prior to that



time. Persistent cough for past two years with white thick sputum. Hemoptysis frequently except for past six months. Influenza was only essential feature of past history. Social history revealed that he was a steamboat pilot who smoked a pack of cigarettes every day. His physical examination revealed a well nourished white male, forty-seven years old. The positive findings were: Bilateral supraclavicular adenopathy. Convex appearance of right upper chest. Telangiectasis. Resonance and vocal fremitus impaired. Sibilant rales over right apex. Definite clubbed fingers. Diagnostic roentgen ray, January 9, 1934, revealed consolidation of right upper lobe with peribronchial infiltration. Tentative diagnosis: Bronchogenic cancer with probable secondary invasion and reaction of lung. Bronchoscopy was done March 16, 1934, and lipiodol instilled. Deep roentgen ray therapy amounted to five thousand and six hundred r units. Patient grew progressively worse and was admitted to hospital May 31, 1934. On June 12th, a diagnostic roentgen ray revealed metastasis to right scapula and fourth rib. Apex of left lung now shows an infiltrative process. His cough continued to increase. In early July he began a septic temperature curve and he expired July 15, 1934.

The autopsy revealed the right upper lobe to be nearly completely replaced by an abscess. This contained a thick, creamy pus. The larger bronchus leading to the upper right lobe presented an indurated, elevated area which was undergoing ulceration. There was direct extension of the tumor mass into the posterior chest wall. Final diagnosis was bronchogenic adenocarcinoma, pulmonary tuberculosis with miliary tubercules of liver, amyloid infiltration of the liver and spleen.

## CONCLUSIONS

1. The increase in primary carcinoma is apparently relative and not actual.
2. Primary pulmonary carcinoma was seen in 0.5 per cent of the cases of the Tumor Clinic.
3. The increase in such cases can be accounted for by more refined roentgen ray diagnosis, better and more frequent biopsy sections with histologic study, increased number of cases visiting the clinics, and public education.
4. The prognosis is very grave, and the mortality rate extremely high in such cases.

## BIBLIOGRAPHY

1. Perret, J. M.: Primary Intrathoracic Malignancy. *N. O. Med. and Surg. Journal* 80:213-228, 1927.
2. Hung, T. C.: Pulmonary Neoplasms—a report of 26 cases. *Lancet* 1:759-762, 1929.
3. Frommel, E.: Les états pulmonaires prédisposant au cancer. *Considérations sur l'étiologie du cancer du poulmon. Rev. de med., Paris* 44:31-40, 1927. Quote Ref. No. 8.
4. Rostoski, Saupe, Schmorl: *Ztschr. F. Krebsforsch* 25:249, 1927. Quote Ref. No. 8.
5. Huguenin, R.: *Le Cancer Primitif du Poumon*, Masson et Cie, Paris, 1928. Quote Ref. No. 8.
6. Sailer, J., and Torrey, R. G.: Intrathoracic Tumors, *Penna. Med. Journal*, 42:539-547, April 1913.
7. Weller, C. V.: Primary Carcinoma of the Larger Bronchi, *Arch. Int. Med.* 11:344-333, 1913.
8. Heacock, C. H., and King, J. C.: Diagnosis of Primary Carcinoma of the Lung, *Radiol.* 24:452, 1935.
9. Stout, A. P.: *Human Cancer*, Lea and Febiger, Phila., 1932.
10. Fishberg, M.: Diagnosis of Pulmonary Neoplasm, *Arch. Int. Med.* 37:745-772, June, 1926.
11. Reimann, Kaufmann's Pathology. Vol. 1:470, Blakiston, Phila., 1929.
12. Norris and Landis, *Physical Diagnosis*, Third Edition, Saunders, 1924.

## TRANSACTIONS OF ORLEANS PARISH MEDICAL SOCIETY

## CALENDAR

JANUARY 3 Pathological Conference, Hotel Dieu, 11 A. M. to 12 Noon.

JANUARY 6 Eye, Ear, Nose and Throat Hospital Staff, 8 P. M.

JANUARY 8 Touro Infirmary Staff, 8 P. M.

JANUARY 10 Pathological Conference, Hotel Dieu, 11 A. M. to 12 Noon.

JANUARY 10 French Hospital Staff, 8 P. M.

JANUARY 13 ORLEANS PARISH MEDICAL SOCIETY, 8 P. M. Installation of Officers, 1936.

JANUARY 15 Clinico-Pathological Conference, Touro Infirmary, 11:15 A. M. to 12:15 P. M.

JANUARY 15 Charity Hospital Surgical Staff, 8 P. M.

JANUARY 16 Eye, Ear, Nose and Throat Club, 8 P. M.

JANUARY 17 Pathological Conference, Hotel Dieu, 11 A. M. to 12 Noon.

JANUARY 17 I. C. R. R. Hospital Staff, 12 Noon.

JANUARY 20 Hotel Dieu Staff, 8 P. M.

JANUARY 21 Charity Hospital Medical Staff, 8 P. M.

JANUARY 22 Clinico-Pathological Conference, Touro Infirmary, 11:15 A. M. to 12:15 P. M.

JANUARY 24 Pathological Conference, Hotel Dieu, 11 A. M. to 12 Noon.

JANUARY 27 ORLEANS PARISH MEDICAL SOCIETY, 8 P. M.

JANUARY 28 Baptist Hospital Staff, 8 P. M.

JANUARY 29 Clinico-Pathological Conference, Touro Infirmary, 11:15 A. M. to 12:15 P. M.

JANUARY 31 Pathological Conference, Hotel Dieu, 11 A. M. to 12 Noon.

During the month of December, besides the regular meeting of the Board of Directors, the Society

held one meeting which was the Tenth Stanford E. Chaille Memorial Oration and Memorial Meeting, held December 9. The following program was presented:

Dr. Chaille: Dean, Teacher and Friend.

By: Dr. Joseph A. Danna.

The Present Status of Fever Therapy.

By: Dr. W. H. Slaughter, Senior Surgeon, USPHS, United States Marine Hospital, New Orleans.

Memorial Address by Dr. Elizabeth Bass.

At this meeting Dr. R. R. Spencer, Senior Surgeon, USPHS gave an explanation of the U. S. Public Health Survey.

The regular meeting scheduled for December 23 was dispensed with because of confliction with the Christmas Holidays.

The annual election of Officers was held Saturday, December 14. There was no opposition for any office and the 1936 Board of Directors will be:

President—Dr. Frederick L. Fenno.

First Vice-President—Dr. Foster M. Johns.

Second Vice-President—Dr. Edwin L. Zander.

Third Vice-President—Dr. J. Raymond Hume.

Secretary—Dr. Gilbert C. Anderson.

Treasurer—Dr. Shirley C. Lyons.

Librarian—Dr. Alton Ochsner.

Additional Members—Board of Directors

Dr. Val H. Fuchs.

Dr. Edwin H. Lawson.

Dr. C. L. Peacock.

The Installation of these Officers will take place Monday, January 13, 1936.

Dr. H. W. E. Walther was elected President of the Southeastern Branch Society of the American Urological Association at the meeting held in Nashville, December 6 and 7.

The following doctors attended the recent meeting of the Southern Surgical Association in Hot Springs, Virginia: Drs. Isidore Cohn, Jos. A. Danna, I. M. Gage, Urban Maes, James D. Rives and Curtis H. Tyrone. Dr. Ochsner is Secretary of this organization having been elected last year. The next meeting of the Southern Surgical Association will be held in New Orleans early in the year of 1936.

The Library will be glad to receive any journals that the members are desirous of giving to them.

Notices have been received that doctors are wanted in Flora, Mississippi and in a lumber camp near Mandeville. For further details inquire at the Secretary's office.

Drs. C. Grenes Cole and Emmett Irwin read papers before the Bi-Parish Medical Society meeting held at Clinton, Louisiana.

Dr. Roy E. de la Houssaye was elected President of the New Orleans Pure Milk Society and Dr. E. A. Socola was elected Vice-President.

#### TREASURER'S REPORT

ACTUAL BOOK BALANCE: 10/31/35.....\$ 696.49

November credits: .....\$ 554.22

TOTAL CREDITS: .....\$1,250.71

November expenditures: .....\$ 535.08

ACTUAL BOOK BALANCE: 11/30/35.....\$ 715.63

#### LIBRARIAN'S REPORT

During November, 685 books and journals were circulated to doctors, or more than 1¼ to each member of the Society. In addition, 798 volumes were loaned to students, making a total of 1483. These figures do not include the great use of books and journals within the reading rooms.

Fifty-four books have been added to the Library during the month. Of these, 43 were received by gift, 14 by binding and 6 from the New Orleans Medical and Surgical Journal. New titles of recent date are listed below.

On request of physicians, members of the staff have collected material on the following subjects during November:

Abdominal pain

Splanchnoptosis

Delayed corneal healing

S. E. Chaille

History of cholera in New Orleans

Telescopic spectacles

Trachoma

Sciatica

History of Surgery

Endobronchial carcinoma

Diabetes insipidus

Food adulteration

Fear

Experimental production of aortic aneurysm.

#### NEW BOOKS—NOVEMBER

Dawson, W. B.—Aids to Psychiatry. 1934.

Davison, W. C.—Complete Pediatrician. 1934.

Magath, T. B. ed.—Medicolegal Necropsy. 1934.

Selling, L. S.—Diagnostic Criminology. 1935.

Simmons, J. S. ed.—Laboratory Methods of the U. S. Army. 1935.

Chicago Institute for Psychoanalysis—Influence of Psychologic Factors Upon Gastro-Intestinal Disturbances. 1934.

Haynes, William & Gordy, E. L. ed.—Chemical Industry's Contribution to the Nation, 1635—1935. 1935.

Knowles, F. C.—Diseases of the Skin. 1935.

Association of American Physicians—Transactions. 1935.

Instituto Butantan (Brazil)—Memorias. 1935.

H. B. Alsobrook, M. D.

Secretary

## LOUISIANA STATE MEDICAL SOCIETY NEWS

## THE BI-PARISH MEDICAL SOCIETY

The Bi-Parish Medical Society met in the Rist Hotel after a bounteous repast prepared and served by Mrs. August Rist. The Society passed to the business and scientific program. Election of officers for 1936 was as follows:

Dr. J. J. Ayo, President  
 Dr. A. S. Tombs, Jr., Vice-President  
 Dr. E. M. Toler, Secretary-Treasurer  
 Dr. T. H. Pargen, Delegate  
 Dr. C. S. Toler, Alternate

Dr. C. Grenes Cole of New Orleans read a paper on "Abdominal Pain, Its Significance and Treatment". Dr. Tom Spec Jones of Baton Rouge had as his subject "Impetigo" and Dr. Emmett L. Irwin, of New Orleans spoke on "Infections of the Hand". All three subjects were handled in a learned manner and all agreed that the essays were the highest and most instructive possible. The papers were discussed favorably by all present. A vote of thanks was extended to Drs. Cole, Jones, and Irwin for their excellent presentations of these instructive and practicable papers. The three were then elected honorary members of the Society.

A vote of thanks was given Mr. and Mrs. Rist for their superb dinner and the whole hearted cordiality extended the Bi-Parish Medical Society.

Members and guests present:

Dr. C. G. Cole, Dr. and Mrs. T. S. Jones, Dr. and Mrs. E. M. Toler, Dr. Emmett L. Irwin, Dr. N. T. Stafford, Dr. A. S. Tombs, Jr., Dr. C. S. Miller, Dr. and Mrs. T. H. Pargen, Dr. and Mrs. B. B. Lane, Jr., Dr. and Mrs. S. L. Shaw, Rev. J. S. McLean, Dr. and Mrs. J. A. Tucker, Miss Hermine Tate, Dr. Eugene H. Countiss, Dr. W. K. Irwin, Dr. S. S. Blackeney, Dr. and Mrs. S. S. Toler, Dr. G. L. Odum, Dr. E. M. Robards, James I. Bunnde, Dr. and Mrs. W. J. Roberts.

The Society adjourned to meet 1st Wednesday in February 7:30 p. m. 1936 in The East Louisiana State Hospital, Jackson, La.

N. F. Stafford, President  
 E. M. Toler, Secretary

## SEVENTH DISTRICT MEDICAL SOCIETY

The Seventh District Medical Society met on Thursday, December 5 at 7:00 p. m. at the Cedar Lane Country Club, Opelousas, Louisiana for dinner, followed by an interesting scientific program:

The Management of Asthmatic Symptoms, Dr. B. G. Efron, New Orleans.

Some Interesting Cases in Plastic Surgery, Dr. Neal Owens, New Orleans.

The Diagnosis of Early Carcinoma of the Cervix, Dr. C. H. Tyrone, New Orleans.

ALLEN PARISH MEDICAL SOCIETY  
ORGANIZED

A joint meeting of the doctors of Allen and Evangeline Parishes was held in Oakdale, December 14, with dinner followed by a scientific program. The object of the meeting was to organize the two parish medical societies.

Allen Parish organized with the following officers:

President, Dr. A. D. Mangham of Elizabeth  
 Vice-president, Dr. Lofton F. Gray of Oakdale  
 Secretary-treasurer, Dr. F. W. Heath of Oakdale  
 Evangeline Parish promised to organize by the first of the year.

A splendid scientific program was given. Dr. N. Silverman of New Orleans, read a paper on "Problems of Gastric Carcinoma" which was followed by an interesting cancer film—"Cancer: Its Life History and Practical Measures" by Dr. J. A. Langford, also of New Orleans, and who is Chairman of the Cancer Committee of the Louisiana State Medical Society.

The state president, Dr. C. P. Gray, held the interest of all in his "Problems of the Medical Profession" and what he had to say on organized medicine was especially well taken.

Dr. P. T. Talbot, secretary of the state society and Dr. Claude A. Martin, counselor for the Seventh District, were present.

## OUACHITA PARISH MEDICAL SOCIETY

The regular meeting of the Ouachita Parish Medical Society was held recently with 90 per cent of the doctors in attendance. At this time a banquet was served which was enjoyed by all.

A paper was read on the "Surgical Approach to the Appendix", by Dr. J. W. Bodley, associate Professor of Medicine of the University of Tennessee, from Memphis, Tennessee. The regular annual oration was presented by the President, Dr. I. J. Wolff. The following officers were elected for the ensuing year and will assume their offices the first meeting in January:

Dr. J. H. Pankey, President  
 Dr. C. U. Johnson, Vice-President  
 Dr. Ralph J. Talbot, Secretary-Treasurer  
 Dr. J. Snelling and Dr. G. Wright, Delegates  
 Dr. G. Snellings and Dr. C. P. Gray, Jr., Alternates.

The program committee is to be appointed by the new President.

## CLAIBORNE PARISH MEDICAL SOCIETY

The Annual Meeting of the Claiborne Parish Medical Society was held at the offices of the Claiborne Parish Health Unit, Homer Louisiana.



on December 17, 1935. The following officers were elected to serve during the year 1936:

Dr. F. Palmer, Homer, La., President  
 Dr. J. E. Batchelor, Haynesville, La., Vice-President

Dr. H. R. Marlatt, Homer, La., Secretary-Treas.  
 Dr. F. Palmer, Homer, La., Delegate to State Meeting

Dr. H. R. Marlatt, Homer, La., Alternate Delegate to State Meeting.

Following the meeting the members of the Medical Society were treated to a barbecue chicken dinner in the rooms of the Woman's Department Club in the City Hall by the Woman's Auxiliary to the Claiborne Parish Medical Society.

#### ST. TAMMANY PARISH MEDICAL SOCIETY

The St. Tammany Parish Medical Society met at Covington, December 20, to elect officers for the incoming year. The election results are as follows:

Dr. J. F. Polk, Slidell, La., President  
 Dr. H. D. Bulloch, Covington, La., Vice-President  
 Dr. F. R. Singleton, Slidell, La., Secretary-Treas.  
 Dr. Roy Carl Young, Covington, La., Delegate to State Meeting.

Dr. Jno. K. Griffith, Slidell, La., Alternate Delegate to State Meeting.

The various committee appointments will be announced by the President-elect at the next meeting. The next meeting will be held in Covington for the installation of the new officers, January 10th, 1936.

#### NEWS ITEMS

Dr. Isidore Cohn, Professor of Surgery and Head of the Department of Surgery in the Graduate School of Medicine of The Tulane University of Louisiana, addressed the meeting of the Southern Surgical Association held at Hot Springs, Va., December 10, 1935, on "Arterial Venous Aneurysm".

Dr. H. W. Kostmayer, Dean and Professor of Gynecology, Graduate School of Medicine of the Tulane University of Louisiana, addressed the meeting of the Tri-County Medical Society held at Brookhaven, Miss., on December 10, 1935. The subject of the talk was "Practical Use of Endocrines."

Dr. L. Roland Young of Covington, La., is in New York, taking two months of Neurology under the well-known Dr. Joseph Globus at Mt. Sinai Hospital. This is the field of Columbia University, Graduate Division or Department. Dr. Young is expected to complete the work and return home for the holidays.

Senior Dental Surgeon C. T. Messner was directed to proceed from Washington, D. C. on October

31, 1935, to the U. S. Marine Hospital, New Orleans, La., U. S. Public Health Service Leprosarium, Carville, La., the U. S. Marine Hospital, Memphis, Tenn., the U. S. Narcotic Farm, Lexington, Ky., and the U. S. Marine Hospital, Louisville, Ky., to inspect dental activities, and return.

Surgeon Peter J. Gorman was relieved from duty at the New Orleans Quarantine Station upon the arrival of Passed Assistant Surgeon C. B. Spencer on or about Dec. 12, 1935, and assigned to duty at the U. S. Quarantine Station, Mobile, Ala.

Harper & Brothers announce that they have acquired the medical book publishing business of Paul B. Hoeber, Inc. A program of expansion is planned, and medical books will be published under the imprint of Paul B. Hoeber, Inc., Medical Book Department of Harper & Brothers. Mr. Paul B. Hoeber, the founder, remains in charge of this department.

#### THE SOUTHERN MEDICAL MEETING

The following Louisiana doctors attended the twenty-ninth Annual Session of the Southern Medical Association in St. Louis:

From New Orleans—

C. C. Bass, W. R. Buffington, Rigney D'Aunoy, L. R. DeBuys, T. J. Dimitry, L. Lilly Dismuke, E. C. Faust, A. Scott Hamilton, W. H. Harris, Roy B. Harrison, E. H. Hinman, John R. Hume, Frank E. Lamothe, J. A. Lanford, Edwin H. Lawson, A. L. Levin, R. R. Madden, W. R. Metz, John F. Oakley, Alton Ochsner, W. J. Otis, Neal Owens, Jos. W. Reddoch, Geo. W. Robinson, John T. Sanders, W. K. Sharp, Jr., Robert A. Strong, R. W. Todd, H. R. Unsworth, J. R. Veal, E. Von Haam, W. A. Wagner.

From Shreveport—

J. T. Crebbin, H. A. Duram, E. B. Erickson, A. A. Herold, J. E. Knighton, Ralph Riggs, C. P. Rutledge, John L. Scales.

From Monroe—

C. P. Gray, H. E. Guerriero, L. L. Shlenken.  
 From Alexandria—J. T. Cappel, M. B. Pearce.  
 From Lafayette—L. O. Clark.  
 From Springfield—N. F. Bray.

#### SOUTHEASTERN SURGICAL CONGRESS

The Seventh Annual Assembly of the Southeastern Surgical Congress will be held in New Orleans, March 9-10-11, 1936, at the Roosevelt Hotel.

The following surgeons have accepted places on the program:

Dr. Arthur Hertzler, Halstead, Kan., Dr. Chevalier Jackson, Philadelphia, Pa., Dr. Francis E. Lejeune, New Orleans, La., Dr. Arthur W. Allen, Boston, Mass., Dr. John F. Erdmann, New York

City., Dr. Jennings Litzenberg, Minneapolis, Minn., Dr. Joseph E. King, New York City, Dr. Fred Rankin, Lexington, Ky., Dr. C. C. Howard, Glasgow, Ky., Dr. George W. Crile, Cleveland Ohio, Dr. Garnett Quillian, Atlanta, Ga., Dr. Paul Flothow, Seattle, Wash., Dr. Alan C. Woods, Baltimore, Md., Dr. Virgil S. Counseller, Mayo Clinic, Dr. Alfred A. Strauss, Chicago, Ill., Dr. W. D. Haggard, Nashville, Tenn., Dr. Roger G. Doughty, Columbia, S. C., Dr. Thomas E. Cormody, Denver, Col., Dr. Charles O. Bates, Greenville, S. C., Dr. Guy Caldwell, Shreveport, La., Dr. Gerry Holden, Jacksonville, Fla., Dr. Emmerich von Haam, New Orleans, La., Dr. Roger Anderson, Seattle, Wash., Dr. A. Street, Vicksburg, Miss., Dr. James S. Mc Lester, Birmingham, Ala., Dr. Edgar Fincher Jr., Atlanta, Ga. There will be others.

#### AMERICAN BOARD OF OPHTHALMOLOGY

1936 Examinations will be held in Kansas City on May 11th, and in New York City in October. All applications and case reports must be filed at least **sixty days** before date of examination. For information, syllabuses and application forms please write at once to Dr. Thomas D. Allen, Assistant Secretary, 122 South Michigan Avenue, Chicago, Illinois.

#### AMERICAN ASSOCIATION FOR THE STUDY OF GOITER

The American Association for the Study of Goiter again offers the Van Meter Prize Award of \$300.00 and two honorable mentions for the best essays submitted on the goiter problem. This award will be made at the discretion of the Society at its next annual meeting to be held in Chicago, Illinois, on June 8th, 9th, and 10th.

The competing manuscripts, which should not exceed 3000 words in length, must be presented in English and a typewritten double spaced copy sent to the Corresponding Secretary, Dr. W. Blair Mosser, 133 Biddle Street, Kane, Pennsylvania, not later than March 1, 1936. Manuscripts received after this date will be held for competition the next year or returned at the author's request.

#### INFECTIOUS DISEASES IN LOUISIANA

Dr. J. A. O'Hara, Epidemiologist for the State of Louisiana, has furnished us with the weekly morbidity reports for the State of Louisiana, which contain the following summarized information: For the forty-sixth week of the year, ending November 16, the following diseases were reported in double figures: 63 cases of syphilis, 39 each of gonorrhea and pneumonia, 38 of pulmonary tuberculosis, 37 of malaria, 32 of diphtheria, 31 of cancer, 12 of whooping cough, 11 typhoid fever, and 10 of measles. Three typhoid fever cases were reported from Lafayette Parish. Of the unusual

diseases, 2 cases of poliomyelitis were reported, 1 from St. John Parish and 1 from Orleans. A case of meningitis was reported also from Orleans. The following week, ending November 23, syphilis again led reportable diseases but with only 30 cases. Following this came 28 cases of pneumonia, 27 of pulmonary tuberculosis, 26 of cancer, 24 each of diphtheria and gonorrhea, 17 of malaria and 15 of scarlet fever. Four cases of meningitis were reported from Orleans Parish and from the same source 1 case of undulant fever and one of anthrax. One case of typhoid fever and two cases of spinal meningitis reported from Orleans were imported cases. For the week ending November 30, there were listed 38 cases of malaria, 34 of diphtheria, 25 of cancer, 22 each of pneumonia and syphilis, 20 of pulmonary tuberculosis, 14 of scarlet fever, 12 of gonorrhea, 11 of influenza and 10 of typhoid fever. St. James Parish reported the largest number of cases of typhoid fever with 3 incidences listed. For the week ending December 7 there were reported 49 cases of cancer, 47 of pneumonia, 42 of pulmonary tuberculosis, 34 of measles, 33 of diphtheria, 28 of malaria, 19 of scarlet fever, 14 of septicemia, 12 of typhoid fever, 10 each of whooping cough and gonorrhea. Typhoid fever cases were scattered throughout the State. Orleans Parish reported 2 cases of poliomyelitis and 1 of undulant fever. The sharp increase in the cases of pneumonia indicated that we are now approaching the pneumonia season. It can be noted also that almost regularly cases of poliomyelitis are being discovered throughout the State. The morbidity report, for the week of December 14, shows a sharp increase in all reportable diseases. Malaria jumped up to 126 cases, pulmonary tuberculosis to almost triple the five-year average, with 86 cases listed. Another increase was in the cases of pneumonia reported, 67 appearing in the report from Dr. O'Hara. Other diseases include 53 cases of syphilis, 52 of gonorrhea, 38 of cancer, 23 of scarlet fever, 19 of diphtheria, 25 of influenza, 13 of typhoid fever, and 10 each of septicemia and pellagra. Of the unusual and rare diseases there was listed 1 case of smallpox from West Carroll Parish and 1 case of typhus fever from Calcasieu. Two cases of cerebrospinal meningitis were reported from Orleans Parish and 1 case of undulant fever from Orleans.

#### HEALTH OF NEW ORLEANS

The Department of Commerce, Bureau of Census reports that for the week ending November 16 there were reported in the city of New Orleans 141 deaths divided 82 white and 59 colored, the death rate of the 3 groups being, respectively, 15.3, 12.5, 22.1. Infant mortality rate was 77, exaggerated by a rate of 142 for negro infants. The succeeding week there was a considerable rise in the total number of deaths 162 taking place this week which

ended November 23. There were 92 deaths in the white population and 70 in the colored making a death rate for the former 14.0 and for the latter 26.2 and for the 2 groups as a whole 17.5. The colored infant mortality rate was unchanged but as there were more deaths in the white infants the rate as a whole was 10.1. A slight increase occurred in the number of deaths for the week ending November 30 as there were 169 deaths, distributed 105 white and 64 negro. This made the rate for this week 18.3; for the white race 16.0 and for the colored 23.9. The infant mortality rate, thanks to a low negro death rate was only 59. There were 10 more deaths the week ending December 7 than were reported the previous week, there being 179 deaths in New Orleans of which 111 were white and 68 were colored. This made a death rate of 19.4; for the white 16.9 and for the negro 25.4. The infant mortality rate jumped to 130 apparently due to the fact that the negro infants waited until this week to die as their rate was 190.

#### CORRESPONDENCE

New Orleans Medical and Surgical Journal  
1430 Tulane Avenue  
New Orleans, Louisiana

Dear Sir:

Thinking it might be of some interest I am enclosing a copy of a cancer cure that was copied from the Philadelphia Saturday Courier, June 10th, 1838; that is, this paper enclosed was made on that date. I don't know the date of the paper in which it was published.

This was handed to me by Mr. Ernest T. George of this City and was found in a package of old family papers belonging to one of his illustrious ancestors. Verily, "there is nothing new under the sun."

Cordially,  
O. W. Bethea.

#### SIMPLE CURE FOR THE CANCER

Take a piece of dough about the size of a hen's egg and a lump of hog's lard, the older the better, of the same dimensions. These substances, thoroughly mixed so as to form a kind of salve, must be spread on a piece of white leather and applied to the diseased part. In three days a cure is completed.

Philadelphia Saturday Courier—June 16, 1838

#### WOMAN'S AUXILIARY

##### LOUISIANA STATE MEDICAL SOCIETY

To all members of the medical profession and to each auxiliary member we extend greetings for a very, very Merry Christmas and hope that your "Santa Stocking" will be filled to overflowing, and may the New Year bring a wealth of good health to each of us and days full of everything that is good.

We are very gratefully indebted to Mrs. W. R. Buffington of Orleans Parish for the following report on the Southern Medical Association Convention which was held in St. Louis November 19-22:

"The Woman's Auxiliary to the Southern Medical Association met with an attendance of 385 at the Jefferson Hotel with Mrs. J. Bonar White presiding.

State reports were read and were indeed very interesting and inspiring as they contained much of the good work which all the auxiliaries are sponsoring.

On the first day of the convention, the auxiliary luncheon was given which was a very gala event, during which several interesting talks were made. After the luncheon, the visitors were taken on a sight-seeing tour of the city followed by a very lovely tea. The next day, following the business meeting, the St. Louis auxiliary entertained the visiting ladies at a beautiful luncheon at the Nurses Home in the hospital center. Following this, there was a tour through the Shaw Gardens and the Lindbergh Museum to view the trophies.

It was very reluctantly that the visitors to the Convention made ready to leave for home after such warm and friendly hospitality that was accorded them."

Mrs. S. M. Blackshear, Chairman of Organization reports the following members-at-large to the Orleans Parish Auxiliary:

Mrs. Roland Young, Covington, La.  
Mrs. J. K. Griffith, Slidell, La.  
Mrs. F. R. Singleton, Slidell, La.  
Mrs. H. D. Bullock, Covington, La.  
Mrs. Lawrence Young, Mandeville, La.  
Mrs. J. F. Polk, Slidell, La

Our President, Mrs. Hermann B. Gessner, would like to stress upon the Presidents of each parish auxiliary the great importance of the Journal being consistently read by our members and her message to you today, is please to have a current copy of the Journal at each meeting so that it may be a gentle reminder.

Mrs. George D. Feldner,  
Chairman, Press & Publicity.

#### CADDO PARISH

The Woman's Auxiliary to the Shreveport Medical Society gave a barbecue for their husbands at the 40 and 8 Club, December 11th. After a delicious supper of barbecued steaks, a short comedy was presented. This play had been revised to include amusing personalities of the doctor husbands present. Following the program, the guests danced.

Mrs. Johnson R. Anderson,  
Chairman, Press & Publicity.

#### OUACHITA PARISH

Most interesting programs were rendered at the



meetings of the Woman's Auxiliary held in October and November with every member enjoying the illustrated lecture of a Cesarean section and the removal of a gall bladder, by Dr. William Bendel.

Several interesting topics were selected and given from "Hygeia" as the chairman of Hygeia stressed the importance of the magazine and our goal to have every member a subscriber or responsible for a subscription.

Three of our members, with their husbands, attended the Southern Medical Convention held in St. Louis—Mrs. C. P. Gray, Mrs. L. L. Shlenker and Mrs. H. E. Guerriero.

Due to the date of our December meeting conflicting with the Holiday Season, it was decided to postpone the meeting until the first week in January and to contribute our luncheon money to the Good Fellows' Fund for the benefit of the needy children. The Auxiliary also offered their services to the Welfare Council and many members are busy collecting food, clothing and

toys for those who are in need.

The Ouachita Parish Auxiliary extends to each of you our Heartiest Holiday Greetings and Many Good Wishes for the Coming Year.

Mrs. D. T. Milam,  
Chairman, Press & Publicity.

#### ORLEANS PARISH

The Woman's Auxiliary to the Orleans Parish Medical Society met on Wednesday, the 11th at the Orleans Club. The work of collecting samples of medicines for distribution to various institutions and collection of old clothing was the feature of the month. There was very little other business and the meeting was adjourned so that the members could enjoy a very delightful musical and Christmas tea. The tea-table decorations were carried out in a very effective Christmas centerpiece.

Mrs. Ralph J. Christman,  
Chairman, Press & Publicity.

## BOOK REVIEWS

*The Medicolegal Necroscopy:* A symposium edited by Thomas B. Magath, Baltimore, Williams and Wilkins Company, 1934. Illus. pp. 167. Price \$2.50.

This book covers a number of papers read at a symposium held at the Twelfth Annual Convention of the American Society of Clinical Pathologists at Milwaukee, Wisconsin, June 9, 1933.

These papers are splendidly written, by master minds, well illustrated, and full of essential information, and should form a part of the library of every pathologist or coroner, who is constantly facing the problems so well dealt with and edited in this volume.

C. GRENES COLE, M. D.

*Synopsis of Surgical Anatomy:* By Alexander Lee McGregor, M. Ch. (Edin.) F. R. C. S. (Eng); with a foreword by Sir Harold Stiles, K. B. E., F. R. C. S. (Edin.) 2nd ed. Philadelphia. William Wood and Company, 1934. pp. 644. illus. Price \$6.00.

The British medical profession seems to be particularly fond of the synopsis and to them we are indebted for several phenomenal collections of facts more or less attractively presented. The reviewer must confess that he does not care for this particular literary form, finding a complete and unabridged discourse on a given subject considerably more satisfying. He must grant, however, in spite of his feeling that British surgeons are, as a rule, much better anatomists than the Americans, and it might be well for us to employ their synopses on anatomy, at least, more than we do.

McGregor's *Synopsis of Surgical Anatomy* is a

one-volume work which is somewhat artificially divided into "The anatomy of the normal" and "The anatomy of the abnormal." The term "artificially" is used because under the latter heading appear such subjects as "The teeth," "The splinters," and "The collateral circulation," which certainly, on the surface, are not abnormal.

The amount of information contained in this volume is tremendous and its accuracy cannot be doubted. The second section is particularly impressive, including as it does such chapters as "The anatomy of congenital errors," "The anatomy of nerve injuries," "The pathology of bone in terms of anatomy," "The anatomical bases of clinical tests," and "The anatomy of surgical procedures."

The text is clear and well arranged. The illustrations are highly diagrammatic and correspondingly simple, and are numerically adequate. They cover anatomical structure, normal and abnormal function, tests and the technique of surgical procedures, among other things. They are in the main very effective, some of them extremely so. The excellent index makes all this material readily available, and another desirable point is that the text is not arranged consecutively but in independent chapters, so that any given reference is complete in itself.

If a student, or, indeed, a surgeon will use this book as a ready reference work, supplementing it with such collateral reading as is necessary for complete understanding of its text, he will find himself, after a comparatively short time, far ahead of most of his associates in his understanding of surgical anatomy. Unfortunately, it is

doubtful that either individual will do so. Both the student and the surgeon are much more likely to be satisfied with the few pertinent facts easily gleaned from the book itself. Teachers of surgery, however, will dream enviously of pupils who live with this volume by day and sleep with it under their pillows at night—and it may be that somewhere such pupils do exist.

JAMES DAVIDSON RIVES, M. D.

*Aids to Psychiatry:* By W. S. Dawson, M. A., M. D. Oxon., F. R. C. P. Lond., D. P. M. 3d. ed. Baltimore, Wm. Wood & Co. 1934. pp. 318.

This is a valuable little compend on psychiatry. It contains a vast amount of information which would be very useful to any student or any lay physician wishing to look up some psychiatric matter. It is well arranged and well written, but would be more useful to Americans if it were adapted from a legal aspect and so on to this country.

EDMUND MCC. CONNELLY, M. D.

*Emotions and bodily Changes:* A survey of literature on Psychosomatic interrelationships, 1910-33, by H. Flanders Dunbar, M. D., Ph. D. New York, Columbia University Press, 1935. pp. 595. Price \$5.00.

In recent years, the medical profession has been increasingly aware of the practical implications of the interrelationships of the psyche and soma, in evaluating the subjective and objective data in an effort to establish a diagnosis, render a prognosis and determine the proper therapy for the patient. The great importance of dealing with the total personality and of being aware of the effects of emotions on the changes in bodily functions, necessitates an acquaintance with the literature dealing with this subject. It is therefore fitting that one should call the attention of the profession to a most important book devoted to this topic. In this book, "Emotions and Bodily Changes," the author, H. F. Dunbar has done yeoman service in a field filled with pseudo-science and fraud. He has made a survey of work to a separation of the real from the suspect in a subject only too often filled with fancy rather than fact. One gains an idea of the tremendous task the author set for himself when it is noted that there is a bibliography of 2251 references many of them from the foreign literature and for the first time rendered into English. The book has three major divisions. Part I deals with "Orientation and Methodology". Part II is on "Organs and Organ Systems" and Part III, on "Therapeutic Considerations and Concluding Remarks". A splendid index of names and one of subject matter simplify and save the reader much time and effort. The author is aware of the lengthiness of his book but he gives two important reasons for this. He desires the reader to compile his own digest and

let the material be self-committal and secondly he feels that it is difficult for the majority of medical men to think concisely in terms of major issues in this field and hence the need for concrete material.

That there is some material in the book that will be indigestible to those of us raised up in the "medical mechanistic tradition" is to be expected. One is occasionally suspicious of the fact that over emphasis is placed upon certain facts simply to drive home the point that there is, as the author quotes W. E. Ritter "neither purely psychic or purely physical illness but only a living event in a living organism, alive only because its psychic and somatic elements are united in a unity." One cannot deny that the author has edited his material, but it has been done with clarity and conviction. The too few editorial comments bespeak authority. To those who feel the necessity to know more of the "psychic component" in disease one cannot too strongly urge the reader to acquaint himself with this splendid study.

I. L. ROBBINS, M. D.

*Story of Medicine in the Middle Ages:* By David Riesman, M. D., Sc. D. New York. Hoeber, 1935. Illus. pp. 402. Price, \$5.00.

A charming history which will be hailed by many who have been impressed with the urgent need for a book devoted wholly to the medical affairs of mankind in an epoch which, if not characterized by great progress, was certainly stamped with an unexcelled romanticism, uncanny subtlety and sterile dialecticism.

So thorough is the author's acquaintance with his material that it requires no effort upon the part of the reader to hark back to those bygone centuries and once again see the medical world of yesteryear engaged in idle speculation and unquestioning authority.

The many debatable features that are the joy of medievalists as the origin of syphilis, for example, are presented with skill and the pros and cons of the subject equally considered. If you wish to be pleasurably informed you cannot fail to avail yourself of the opportunity of the work of a distinguished clinician and a great historian.

I. L. ROBBINS, M. D.

*The Spleen and Resistance:* By David Perla, M. D. and Jessie Marmoston, M. D. with a foreword by David Marine, M. D., Baltimore, The Williams & Wilkins Company, 1935. Price \$2.00.

This brief monograph of nine short chapters and a resume is based upon an exhaustive and critical review of the literature by authors who are active workers in this field. Chapters are devoted to the following subjects: anatomy of the spleen, its pathologic changes in the various infections, the spleen as a macrophage tissue, role in antibody formation, effects of splenectomy upon natural resistance,

relation of spleen to acquired resistance in latent infection, compensatory changes following splenectomy, elements of spleen responsible for the protective mechanism, and the variability in effect of splenectomy.

The authors feel that the phagocytic functions of the spleen have been over emphasized, and that it is likely that its part in resistance may be played through subtle chemical mechanisms. The part played by the spleen in certain animals in keeping infections in a state of latency is probably the most spectacular protective function of the organ we know.

In spite of this capable review of the 447 articles listed in the bibliography, it is obvious that statements of the exact function of the spleen in resistance to infection in man have yet to be made. Those who aspire to a grasp of the subject as it now stands, or plan to extend the present information will find the monograph of great help.

ROY H. TURNER, M. D.

*Tumors of the Urinary Bladder:* By Edwin Beer, M. D., F. A. C. S. Baltimore, William Wood & Co. 1935. pp. 166. Price, \$3.50.

The value of monographs in modern medicine is being better appreciated by the profession at large and this tendency is manifest by the increasing number of such works in our modern libraries. This volume is an excellent example of the important value that such a monograph possesses, as it is an excellent compend of the entire subject of bladder tumors.

The experience of the author in this field is well recognized and he is rightfully entitled to bring together his experience over the past twenty-five years.

The monograph is devoted entirely to epithelial growths and these are classified into three main groups: (A) Benign papillomata. (B) Papillary Carcinomata. 1. Superficial and 2. Infiltrating. (C) Non-papillary, infiltrating carcinomata.

Thus, the author does not attempt to follow the classification by Broders, based on microscopical studies of tumors removed by biopsy or by operation, and states that the latter method is not regularly successful, due to the personal equation of the microscopist leading to confusion and difference in grading.

The symptoms and diagnosis of bladder tumors, with stress on the value of cystoscopy and cystography is considered, but the most important part of the book deals with the treatment of these growths. Transurethral treatment employing high frequency electro-coagulation and the introduction of radium emanation seeds by the transurethral and suprapubic routes are discussed in detail. Partial and complete cystectomy in the treatment of infiltrating growths occupy the remainder of the book. In connection with total cystectomy, the author prefers to dispose of the

ureters by implanting them into the skin rather than by implantation into the bowel. In discussing the latter operation he advises that the right ureter be implanted into the ascending colon, a procedure which has been shown to lead to complete destruction of the involved kidney.

CHARLES EHRLERT, M. D.

*Human Pathology:* By Howard T. Karsner, M. D., with an introduction by Simon Flexner, M. D., 4th ed. rev. Philadelphia, J. B. Lippincott Co. 1935. pp. 1013.

The appearance of four editions in less than ten years proves the popularity that Karsner's book on Human Pathology enjoys amongst American teachers and students. Written in a clear, concise and fluent style, it contains in less than 1,000 pages all the fundamentals that a physician should know about the mechanism of disease and its production. Divided into two major divisions of General Pathology and Systemic Pathology, sequential arrangement of the chapters make the book especially adaptable for teaching, each chapter being a well organized presentation of different aspects of pathology. In the part given over to special pathology, much reference is fortunately made to the clinical manifestations and features of the pathological lesions, and these are discussed in a masterful and authoritative manner. The fourth edition includes the most recent advances in all fields of pathology and the inclusion of extensive bibliographic references makes the work a truly modern textbook which can be highly recommended to the graduate student, and the practitioner as well as the beginning student of medicine.

EMMERICH VON HAAM, M. D.

*A Text-book of Fractures and Dislocations:* By Kellogg Speed, M. D., Philadelphia, Lea and Febiger, Third Edition, 1935. pp. 1000. Price \$11.00.

Since 1928, the year the preceding edition of this book was published, acceptable improvements have been popularized in methods of managing various fractures. Long a popular text-book, this edition is brought up to date and shows that Dr. Speed is not unaware of progress in methods he formerly used.

The description of the mechanism of skull fractures is excellent. Less praise is due the discussion of the therapeutics of craniocerebral injuries. Other good chapters are those dealing with carpal injuries and injuries to the femur. The number of recent volumes on fractures and dislocations make selection for excellence more difficult. With this edition Kellogg Speed's book remains one of the best. The subject of fractures and dislocations is covered very completely and the book is amply illustrated.

HOWARD R. MAHORNER, M. D.



*Diagnostic Criminology:* By Lewell S. Selling, M. D., Ph. D., D. N. B., Ann Arbor Michigan, 1935. Edwards Brothers, Inc., pp. 175. Price, \$2.25.

This little volume, which is a first edition and limited to 350 copies, intrigues one for several reasons. It represents a distinct innovation in the publisher's art, as it is produced by lithoprinting rather than by the more conventional manner. Lithoprinting is equally as satisfactory as printing, and can be produced and sold more cheaply. The physician has borne an undue burden in the expense of scientific books that often recline on bookshelves after having been once read, or partly read, so we should welcome any effort to reduce the cost of material for our libraries. The lithoprinting of Dr. Selling's book is quite satisfactory and can be easily read. I trust we shall see more books published in this form.

Diagnostic Criminology is prepared for the psychiatrist who wishes to improve his approach to the medico-legal problems, especially as represented by the adult criminal and his progenitor, the juvenile offender. In recent years the demand for well-trained medical criminologists has exceeded the supply of well-trained psychiatrists with necessary court experience. The author hopes that this volume will be of assistance in developing the proper method of studying the problem presented by anti-social individuals. Young lawyers, psychologists, physicians, and sociologists interested in this new and important field may learn much from this book.

Chapter II gives the historic introduction to the problem of criminology and gives a good outline of the criminal gradually becoming more and more a medical problem, until at the present time psychiatric interpretation of abnormal or illegal behavior is deemed necessary for the proper handling of those who act contrary to approved ways.

Chapter III describes the examination of the adult offender, and the procedure followed in several states is given. A social history, careful physical examination, with laboratory investigation as indicated, and a psychiatric examination, are required to obtain a proper conception of the criminal and the motivating factors that caused him to become an object for legal consideration. This chapter is well done, but stresses too little, in many instances, prolonged observation or often repeated interviews or examinations before an adequate interpretation of the criminal can be given to the court.

The method of study of the juvenile offender is that followed by child guidance clinics. The social history, the psychological examination, the thorough physical examination, and lastly the psychiatric examination of the child himself are properly outlined as the approved method of study of the juvenile offender.

Important syndromes of both adult and juvenile

offenders are described. These case records may be interesting to the novice, but are of no particular value to the experienced psychiatrist.

Diagnostic Criminology as an outline of medical study of criminals and their acts is valuable, and can be read with much benefit by anyone entering this field.

C. S. HOLBROOK, M. D.

*Public Health Administration in the United States:*

By Wilson G. Smillie, A. B., M. D., Dr. P. H. New York, The MacMillan Company. pp. 458. Price \$3.50.

This book summarizes in a very excellent manner the various phases of public health administration as practiced in the United States. Any one who has any knowledge of public health practice will readily realize the value of setting forth in one volume an epitome of the most worth while methods of practice. The book comes at an opportune time because of the increasing interest in the development of public health activities through Federal aid.

The book is divided into four parts. The first deals with the functions of a health organization and the history of public health administration in the United States. The second part describes in more detail the administrative features of communicable disease control. The third part describes the basic activities of a health organization, i. e. vital statistics, epidemiology, the laboratory, public health nursing, child hygiene, sanitation, and other activities. The fourth part describes the organization of public health programs. The Federal, State, and local organizations are outlined. The growth and development of voluntary or non-official health organizations and their functions are also presented. A very valuable chapter on the relation of the practicing physician to health departments is included. Some consideration is also given to the appraisal of health activities and the training of personnel.

The value of the book is enhanced by its excellent printing and illustrations, its references, and a good index. The book can be recommended without hesitation to any person interested in the administrative features of public health.

C. C. DAUER, M. D.

*The Treatment of Diabetes Mellitus:* By Elliott P. Joslin, M. D., M. A., with the cooperation of Howard F. Root, M. D., Priscilla White, M. D., and Alexander Marble, M. D. 5th Ed., Rev. & Rewritten. Philadelphia, 1935. Lea & Febiger. Price, \$6.00.

There has been in the past generation, perhaps no other field of medicine in which a single monograph has been predominant as has Joslin's *Treatment of Diabetes*. To it all students of diabetes have turned for instruction and guidance. Within

its covers there has been found the latest, best and most comprehensive information on all aspects of the subject,—history, pathology, morbid physiology, theories and practical clinical data.

This new edition has been so largely rewritten and rearranged that it almost constitutes a new book. Some idea of the extent of the revision may be given by the fact that this fifth edition has 620 pages whereas the fourth edition had 998 pages. The constant development of new material demanding inclusion had made a radical rearrangement imperative if both of the other alternatives, (1) an unduly bulky volume, (2) the exclusion of important material, were to be avoided. A careful comparison of the two editions has served to show how successful and satisfactory has been the choice of matter to be retained and how pleasing the manner of rewriting. Drs. Howard Root, Priscilla White and Alexander Marble have contributed a number of the important new chapters.

I. I. LEMANN, M. D.

*Laboratory Methods of the United States Army.*

Edited by James S. Simmons, Philadelphia, Lea & Febiger, 1935, pp. 1091. Price \$6.50.

This fourth edition of the laboratory methods in use in the special training courses given in the Army Medical School is, as one would expect, thorough, competent and complete.

No effort has been made to sacrifice the theories or concepts of fundamentals for brevity, and as a result the reader can definitely interpret the findings. This is particularly exemplified in the 39 pages devoted to the determination of liver functioning.

An interesting feature is the section on statistical methods. The application of mathematics to analysis of experimental or clinical data is usually ignored by the average medical enthusiast. The lack of appreciation of such "figures" largely accounts for the short life of many of our theories and deductions.

As a reference book to nearly all that pertains to clinical pathology in its broadest sense, this volume has few equals.

F. M. JOHNS, M. D.

*The Doctor and the Public: A study of the Sociology, Economics, Ethics and Philosophy of Medicine, Based on Medical History:* By James Peter Warbasse, M. D. New York, Paul B. Hoeber, Inc. 1935. pp. 572. Price \$5.00.

This charming romance of the genesis and evolution of medicine in its several aspects, is presented in a most beautiful style. One is quickly impressed with the fact that the author is a scholar, amply endowed with the happy faculty of expressing himself in a manner at once stimulating, engaging and entertaining. Space will not permit a detailed account of the subject matter.

One important fact is developed, however, that medicine, from being an individual and isolated thing, has now become part and parcel of our civilization. Many may not agree with the remedy which the author prescribes for the future of doctors and medicine but none can question his sincerity and conviction when he trenchantly and factually states that the future of the profession lies in cooperative organizations voluntarily formed and free of any political influence. He feels that such societies offer the only salvation of the medical profession; that if the doctor does not take matters into his own hands and so shape his individual and collective destiny, then the government, urban, state or national will sooner or later come to control his professional life at a definite disadvantage to himself and his public. Unquestionably, this book should be read by all interested in the relationship of the doctor and the public.

I. L. ROBBINS, M. D.

*Classical Contributions to Obstetrics and Gynecology:* By Herbert Thoms, M. D., with a foreword by Howard A. Kelly, Springfield, Ill. Charles C. Thomas, 1935. pp. 265. por. Price \$4.00.

Few publishers have had the satisfaction of offering to the profession volumes of medical classics which approach in quality and enjoyment those which bear the mark of Charles C. Thomas. The reception accorded classical descriptions of Diseases, Selected Readings in Pathology and others, undoubtedly influenced the publishers to add to the series.

This book marks another venture into obstetrical history for Herbert Thoms. It is larger and more comprehensive than his previous Chapters in American Obstetrics and is modelled to the pattern established by Majors Classical Description of Diseases. It contains the more notable contributions to the two sciences of obstetrics and gynecology, in the original wording of their creators, with short biographical sketches of the life from whence each came.

The chapters are arranged so as to group the material into general subjects and, in these various groupings, the essays are presented in chronological order. As an example, the chapter upon puerperal fever contains the writings of Hippocrates, Alexander Gordon, Charles White, Holmes, Semelweis, and Pasteur upon this subject. As the reader progresses, he leaves Gordon who first demonstrated the infectiousness of the condition, to find Holmes who shows its contagiousness and, with Semelweis, traces the modes of transmission, and finally reads the words of Pasteur describing the experiments which proved beyond question the source and nature of the disease, and the most commonly responsible organisms.

The names of a few, such as Smellie, Harvey, and Mauriceau, in accordance with their greatness,

appear in more than one chapter. The biographical sketches are fairly complete, considering their brevity, and are amply sufficient for their purpose.

The contributions to gynecology are all contained in one short chapter and this subject has been slighted for its older associate. Papers by McDowell, Nathan Smith, Atlee, Sims, Tait, Wells, and Noeggerath are included in the group.

No living authors are represented and no material written since 1900 is used. This, in part, may explain the shortness of the chapter devoted to gynecology. Future generations will, no doubt, add many names, well known in the past thirty-five years, to the author's list.

The book leaves one hungry for more.

PERRY THOMAS, M. D.

*Diseases of the Liver, Gallbladder, Ducts and Pancreas, their Diagnosis and Treatment:* By Samuel Weiss, M. D., F. A. C. P. New York, Paul B. Hoeber, Inc., 1935. pp. 1099. Price \$10.00.

One cannot appreciate the tremendous amount of labor that Dr. Weiss must have devoted to the preparation of this magnificent book, until the table of contents is noted. It should become a standard book of reference. If anything that has to do with the diagnosis and treatment of diseases of the liver, biliary system and pancreas, has been omitted, it must be reckoned as either of no consequence or as an omission on the part of the publisher. The set-up of the book is in the true Hoeber tradition, which leaves little to be desired, except that its approximate 1200 pages make it quite cumbersome and somewhat inconvenient for armchair study. The section devoted to references is arranged according to subjects and comprises 92 pages. In addition there is a detailed table of contents with both a personal name and a subject index. There are several hundred illustrations and diagnostic and therapeutic procedures are fully given. The chapter on surgery is by J. P. Grant, M. D. and that on roentgenology by A. J. Quimby, M. D. The reviewer cannot attempt to give an adequate review of the subject matter. It is his opinion that the author has held himself aloof from any partisan participation in controversial matters and has presented opposing opinions and theories fully and fairly. He presents a great deal of his own material and refers freely to the literature in the discussion of diseases treated in the book. One might find, here and there in the book, statements to which exception might be taken, but that does not detract from the fact that this splendid volume must prove of inestimable value and importance to those of us who still have to go to books to procure the clarifying force of the

authority, who is able to separate the true grain from the tremendous amount of chaff that appears in print.

I. L. ROBBINS, M. D.

*Textbook of Attendant Nursing:* By Katharine Shepard, R. N. and Charles H. Lawrence, M. D., F. A. C. P. New York, The Macmillan Company, 1935. pp. 433. Price \$3.00.

This volume, intended as a text-book for student nurses, combines sections on Anatomy, Physiology, Diseases, Dietetics, and Nursing Procedure, grouped according to subject. It should help to simplify the teaching of what is generally needed in the daily routine of hospital or home nursing, and should be of especial value to nurses doing household nursing. The arrangement is simple and ideal.

JUSTINE O'BRIEN, R. N.

#### PUBLICATIONS RECEIVED

J. B. Lippincott Company, Philadelphia: *International Clinics* Vol. IV. Forty Fifth Series, December, 1935, by Louis Hamman, M. D.

The MacMillan Company, New York: *New Pathways for Children with Cerebral Palsy*, by Gladys Gage Rogers and Leah C. Thomas.

The Commonwealth Fund, New York: *The Bacteriology of Typhoid, Salmonella, and Dysentery Infections and Carrier States*, by Leon C. Havens, M. D.

Noble and Noble Publishers, Inc., New York: *Free Medical Care*, by E. C. Buehler.

The C. V. Mosby Company, St. Louis: *The Parathyroids in Health and in Disease*, by David H. Shelling, B. Sc., M. D. *Infant Nutrition*, by Williams McKim Marriott, B. S., M. D. *Diseases of Women*, by Harry Sturgeon Crossen, M. D., F. A. C. S. and Robert James Crossen, M. D. *Immunology*, by Noble Pierce Sherwood, Ph. D., M. D.

The Yearbook Publishers, Chicago: *The 1935 Year Book of General Medicine*, by George F. Dick, M. D., Lawason Brown, M. D., George R. Minot, M. D. S. D., F. R. C. P., William B. Castle, M. D., A. M., William D. Stroud, M. D., George B. Eusterman, M. D.

Debaters Information Bureau, Portland, Me: *Complete Handbook on State Medicine*, compiled by J. Weston Walch.

Edwards Brothers, Inc., Ann Arbor: *The Patient and the Weather*, Vol. 1, Part 1, *The Footprint of Asclepius*, by William F. Peterson, M. D.

Duke University, Durham N. C.: *Law and Contemporary Problems. Expert Testimony*. Vol. 11, No. 4—School of Law.



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## CAUSES AND TREATMENT OF DYSMENORRHEA\*

WITH SPECIAL REFERENCE TO THE VALUE  
OF RESECTION OF THE SUPERIOR  
HYPOGASTRIC PLEXUS IN  
OBSTINATE CASES

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AND  
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Increased interest during recent years in the problem of severe pain associated with menstruation has resulted in some apparent progress in treatment of the condition, but the views of the profession on the subject are by no means uniform and the question of its etiology and treatment are still of vital interest to every physician. It is universally granted that many factors are involved in the production of dysmenorrhea and that any one case may be due to a combination of two or more of these etiological factors.

For purposes of classification the terms "primary dysmenorrhea" and "secondary dysmenorrhea" are of definite value, but for clinical application they are less serviceable as the origin is frequently obscure and a differential diagnosis can be made only through the process of elimination. This discussion, therefore, will include not only primary dysmenorrhea, but also dysmenorrhea due to associated conditions which sometimes make it difficult or even impossible to differentiate clinically the primary from the secondary type. We shall

assume, however, that gross pelvic pathology and pronounced constitutional disease have been eliminated as causative factors.

### PROPHYLAXIS OF DYSMENORRHEA

Preventive measures offer the greatest opportunity for obtaining lasting results in the treatment of dysmenorrhea. The mental attitude of the young girl towards menstruation and the function of reproduction, together with the degree of care given during the years of puberty, often determines the satisfactory or unsatisfactory character of menstruation during succeeding years.

A program of continuous and gradual education should be followed from childhood and the young girl informed of what to expect at the onset of menstruation in order that she may be spared fear and mental shock. No mention whatever should be made of pain. Parents should be careful to avoid overtaxing the child with too arduous school work and extra-curricular activities during puberty, but there should be no change in manner of living. Customary activities, including modified gymnasium work and routine bathing, should be continued during the period as exercise and baths tend to relieve congestion and an excellent psychic effect is produced by the continuation of normal habits.

### PSYCHOLOGICAL FACTORS

Many gynecologists believe that dysmenorrhea is frequently due to a neurosis.<sup>10</sup> From our own experience, we believe the neurotic factor is infrequent but nevertheless important. Certain women, particularly those of inferior mental background, may magnify the sensation of discomfort accompanying normal menstruation into one of acute pain. Others, having a definite pathologic basis for dysmenorrhea, may

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suffer to such an extent each month that a constant anticipation of recurrent pain is produced, the nervous system gradually undermined, and a definite neurosis eventually developed. It is in these ways, we believe, that neurosis is a factor in dysmenorrhea.

In such cases any existing pathology should be corrected and the patient gradually re-educated through intelligent psychotherapy and the use of simple hygienic measures.

#### MECHANICAL FACTORS

Many gynecologists still hold to the theory that mechanical obstruction, in the form of stenosis of the cervix and abnormal positions of the uterus, is a definite cause of painful menstruation in spite of the fact that data secured from animal experimentation and also clinical evidence would seem to prove the contrary.

Our experience has been that few permanent cures are obtained from the use of the stem pessary and that the small percentage of cases which respond clinically to dilatation can better be treated by use of the negative pole of the galvanic current. Many cures attributed to the stem pessary have been associated with pregnancy and it is rational to suppose it is this rather than the stem pessary which has given relief, an effect probably due largely to the re-establishment of balanced hormonal function and not to dilatation of the internal os incident to use of the stem pessary or to delivery.

#### ENDOCRINE FACTORS

Unfortunately, only a few men in the larger centers have made a special study of endocrinology and definite knowledge of endocrine function is at present so limited that little of clinical value can be presented.

The recent investigations of Novak and Reynolds concerning the clinical effect upon dysmenorrhea of the luteinizing principle obtained from the urine of pregnant women, Antuitrin-S, gave promise of being of inestimable value in the treatment of these cases,<sup>9</sup> but up to the present time we have been unable to secure favorable results from this method of treatment. The administration of thyroid extract has given excellent results in cases exhibiting definite hypothyroidism and we have also given it em-

pirically with gratifying results in a few cases of dysmenorrhea with metabolic readings within normal limits.

#### CONSTITUTIONAL FACTORS

Pronounced constitutional disorders will, of course, be eliminated as causative factors, but certain border-line conditions, such as mild secondary anemia (with red blood cell count between 3,500,000 and 4,500,000 and hemoglobin from 65 to 85 per cent), chronic constipation, postural defects, and general lack of physical development should be mentioned as possible causes of dysmenorrhea.

These conditions should be treated by administration of iron tonics, regulation of bowels, general upbuilding diet, increase in hours of sleep and outdoor sports and special exercises.

#### EXTRINSIC FACTORS

Chronic appendicitis, ureteral stricture<sup>6</sup> and endocervicitis are occasionally associated with dysmenorrhea of the milder type. In such cases correction of these conditions not infrequently results in relief of menstrual pain.

Treatment of cervical infection is sometimes neglected in cases in which infection is concealed within the deep racemose glands of the canal with the outlet presenting a healthy appearance. The symptoms produced by this condition may seem out of proportion to apparent pathology, but complete removal of the infected endocervical glands by conization with the high frequency current often results in relief of dysmenorrhea. (The diagnosis and treatment of this condition have been fully discussed in a former paper.<sup>13</sup>)

These possible causes should be kept in mind, though we do not believe they are responsible for the severe, intractable type of pain encountered in certain cases.

#### GENERAL INSTRUCTIONS

Written instructions outlining details of routine hygienic measures, with special reference to exercise, should supplement individualized oral instructions. The written sheet not only serves as a permanent reference for the patient, but also helps in securing cooperation of the mother or husband.

In our experience, outdoor sports and exercise and also special muscle exercises are of

decided value in the treatment of ninety-five per cent of dysmenorrheic patients, as curative measures in some and as valuable adjuvants in others. Boynton's report of an incidence of 6.98 per cent dysmenorrhea in nurses as compared with 20.38 per cent in university women<sup>1</sup> emphasizes the importance of activity and is in accord with our own observations in a smaller but similar group of cases.

There is a limited number of patients, of course, in whom some constitutional condition contraindicates vigorous exercise, including cases of fatigue amounting to almost complete exhaustion, as in teachers and students at the end of the school year. For these patients only special exercises adapted to individual needs are recommended. Meaker suggests the following exercises for the use of particular muscles:

"(a) The patient lies on her back with her knees drawn up and slowly, but with the maximum of force, alternately draws in and pushes out the musculature of the lower abdominal wall to the fullest possible extent. This should be repeated twenty times, at a rate not faster than five times a minute.

"(b) Lying in the same position, the patient slowly and forcefully contracts the levator ani and maintains contraction for five seconds. It is easy to explain what is required here by stating that the effort is the same as one would make in trying to hold in a loose bowel movement. This is repeated five times a minute for twenty times.

"(c) Finally, the knee-chest position is assumed for five minutes. This is attained by having the patient kneel upon the table or other support, the head being turned to one side. The hips are kept as high as possible and the thighs must be perpendicular to the table or support on which the patient is kneeling.

"These exercises are surprisingly vigorous and in the course of weeks, if faithfully carried out, will produce a definite effect in the way of stimulating pelvic circulation and relieving chronic congestion."<sup>8</sup>

#### TREATMENT OF THE ATTACK

A number of drugs have been used in the treatment of pain during the menstrual flow. Opiates are naturally effective, but are unde-

sirable because of their habit-forming tendencies. Proprietary medicines contain either opiates or alcoholics and are equally undesirable. Benzyl benzoate has been highly recommended by some, but we have found practically no benefit from its use.

Atropine administered orally in 1/150 of a grain doses every four hours, a day or two before onset of menstruation, has given good results in a number of cases, an effect which is explained by its soothing influence on the uterine nerve endings, irritability of which may be responsible for pain. The cold tar and barbituric acid preparations, combined with codeine when necessary, may be used with safety until the cause of the condition has been found. As is well known, physiotherapy in the form of heat is also of value.

#### SEVERE, PERSISTENT DYSMENORRHEA

In a small percentage of cases dysmenorrhea fails to respond to any of the above measures and remains persistent and disabling in character. An inquiry concerning this type of dysmenorrhea, in a questionnaire of ours sent out in 1931 to leading gynecologists of the United States and Canada, revealed the seriousness of the problem of intractable dysmenorrhea and the drastic measures which the profession has been forced to use in relieving this unfortunate group of women: 176 men suggested hysterectomy or castration doses of radium, while 136 felt these measures were too radical. At the time we reported the results of this questionnaire<sup>11</sup>, we were in accord with those who recommended hysterectomy or radium in the small group of cases of severe or intractable dysmenorrhea.

In reviewing the literature at that time, however, our attention was directed to the work of Cotte and his report of a large number of cases of persistent dysmenorrhea relieved by resection of the nerve fibers of the superior hypogastric plexus. Since that time we have performed resection in ten cases and now recommend the use of this operation for severe, persistent dysmenorrhea instead of the more drastic measures formerly used. It is stated that this operation had been done as early as 1898 for relief of pelvic neuralgia<sup>4</sup>, but to Cotte goes



credit for perfecting the technic of resection of the superior hypogastric plexus, also called the presacral nerve, as now used by the majority of men in this country<sup>2</sup>.

#### RESECTION OF THE SUPERIOR HYPOGASTRIC PLEXUS

The patient is placed in extreme Trendelenburg position and prepared as usual for abdominal operation. Good exposure and complete relaxation are essential. A left medio-lateral incision is made, extending an inch and a half above the umbilicus and four inches below the umbilicus. No attempt is made to pack off the intestines until the patient is thoroughly relaxed. Then they are gently packed off, preferably with a six yard gauze roll covered with a jacket of ordinary domestic silk to avoid excessive trauma to the parietal and visceral peritoneum. This brings into view the bifurcation of the abdominal aorta as well as the left common iliac vein. The peritoneum is elevated with two forceps and nicked between the forceps. Incision is carried up to the level of the origin of the inferior mesenteric artery and downward an inch and a half to two inches. The nerves will be found buried in fibrocellular tissue, their arrangement being very irregular. In some patients we are able to demonstrate fairly good sized nerve cords and in others the nerve filaments are diffused in the areolar tissue. In order to insure clean dissection of all filaments and to avoid the danger of injury to the median sacral artery, an aneurysm needle is passed underneath the nerve structure at the bifurcation of the aorta and kept under the fibers as the needle is passed upward and downward. From the bifurcation of the aorta the needle is carefully passed upward to a point just below the origin of the inferior mesenteric artery. An artery forcep is applied to the nerve fibers below the proposed point of severance to insure resection of all filaments and the fibers are then cut. The aneurysm needle is next carefully passed downward about an inch or an inch and a half and all filaments extending laterally across the vessel are severed. This insures complete resection of the nerve plexus over a triangular area about an inch and a half in extent, from a point slightly above the bifurcation of the aorta down-

ward. It is usually not necessary to ligate the nerves before cutting them, but if there is enough oozing to make this necessary it may be done with 00 plain catgut. After the bleeding is controlled, the edges of the peritoneum are approximated with No. 1 plain catgut.

Observance of the proper technic is highly important as the percentage of relief obtained is in direct ratio to the thoroughness with which the operation is performed. Cotte has repeatedly stated his opinion that the poor results reported by some of his confreres are due to incomplete resection of the nerve fibers.

Of the ten patients upon whom we have performed resection according to this technic, six have been relieved of the severe disabling dysmenorrhea. One of the first patients subjected to the operation received only about fifty per cent relief, probably because of incomplete resection of the filaments. One patient we have been unable to follow up and two cases are too recent for any report of results. Four cases in the above group are briefly reviewed:

Mrs. R. A. N., 28 years old, complained of menorrhagia and severe dysmenorrhea with pain lasting three or four days each period. The usual hygienic measures, antispasmodics and anterior pituitary products failed to give relief and laparotomy was performed. The uterus was suspended by Mayo-Barrett technic, the appendix was removed and the superior hypogastric plexus resected according to the technic outlined above. Complete relief from severe dysmenorrhea resulted, only slight discomfort in the pelvis being noticed during the flow. Irregular menstruation, noted before the operation, continued temporarily, but has responded to glandular therapy.

Mrs. B. A. M., 26 years old, complained of pain in the lower abdomen and severe dysmenorrhea of disabling character necessitating two days in bed each month in spite of palliative treatment. After all other methods failed to give relief, operation was performed. The appendix was removed and resection of the hypogastric plexus done. Dysmenorrhea was relieved to the extent of about seventy-five per cent for a period of months. The patient subsequently became pregnant and has recently had a normal delivery.

Miss A. F. was admitted to the hospital complaining of abdominal pain with nausea and vomiting of two days' duration. There was slight rigidity over McBurney's point; urine was negative, and the blood count was as follows: red blood cells, 4,320,000; white blood cells 6,250; small mononuclears 29; large mononuclears 7;

neutrophils 60; eosinophils 2; and basophils 2. Menstruation began at the age of thirteen, with severe pain since onset, persisting in spite of palliative treatment and gradually becoming more severe. At operation a medio-lateral incision was made, the pelvis examined and found negative; the appendix was removed according to the usual technic; incision was then extended upward and the hypogastric plexus resected. Complete relief of menstrual discomfort followed operation.

Mrs. E. M., 22 years old, complained of pain in the lower quadrant, dysmenorrhea and sterility. Menstruation began at the age of thirteen and was always irregular, with pain during each period. This had gradually increased in intensity in spite of palliative treatment and during the two or three months prior to operation it had been necessary to administer morphine every three or four hours during the first forty-eight hours of the flow in order to obtain relief. The patient had been married four years with no pregnancy. At operation a diagnostic curettage was done and a stem pessary inserted for sterility; a left medio-lateral incision was made, the appendix was removed in the usual manner, the utero-sacral ligaments were shortened, a Mayo-Barrett suspension was done, and the superior hypogastric plexus resected. Complete relief of severe pain followed the operation, only slight sensation of discomfort being experienced during the flow.

It will be noted that in every case in our small series other surgery which is occasionally capable of relieving the milder type of dysmenorrhea was performed at the same time resection was done. We are confident, however, that this other surgery was not responsible for relief of the severe dysmenorrhea suffered by these patients. Our opinion is based upon years of experience with this persistent type of dysmenorrhea in which pain was not relieved by similar surgery without resection. We therefore conclude that resection of the nerve fibers of the superior hypogastric plexus was responsible for the high percentage of relief from severe dysmenorrhea in these intractable cases.

#### SUMMARY AND CONCLUSIONS

Every case of dysmenorrhea should be subjected to complete study and careful treatment with reference to possible psychological causes, endocrine factors, constitutional disorders, and involvement of extrinsic conditions. In the small percentage of cases in which pain remains severe and disabling in spite of ex-

haustive study and application of all simpler methods of treatment, resection of the superior hypogastric plexus is recommended. The benefits of the operation are permanent in nature and the physiological function of the bladder, bowels and parturition are not affected. Notwithstanding the fact that results have been effective and gratifying to both surgeon and patient, we must not lose sight of the fact that this is a major operative procedure carrying with it all the dangers of such operations. It should be performed by only the well-trained gynecologist or surgeon and in cases of severe disabling dysmenorrhea which have been subjected to thorough study and have resisted all simpler methods of treatment.

#### BIBLIOGRAPHY

1. Boynton, R. E.: Study of menstrual histories of 2,282 university women. *Amer. Jour. Obst. and Gynec.*, 23:516, 1932.
2. Cotte, G.: Resection of the presacral nerve (superior hypogastric plexus). *Lyon Med.*, 144:653-656, 1929.
3. Counseller, V. S., and Craig, W. McK.: The treatment of dysmenorrhea by resection of the presacral sympathetic nerves: evaluation of end-results. *Amer. Jour. Obst. and Gynec.*, 28:2:161-172, 1934.
4. DeCoursey, J. L.: Resection of the presacral nerve for dysmenorrhea. *Amer. Jour. Surg.*, N. S., 23:3:408-412, 1934.
5. Greenhill, J. P.: Treatment of severe dysmenorrhea by pelvic sympathectomy. *Amer. Med.*, 40:290-293, 1934.
6. Hummer, G. H.: What the gynecologist should know about urology. *Amer. Jour. Obst. and Gynec.*, 14:4:453, 1928.
7. J. A. M. A., 104:9:745-746, Editorial comment. March 2, 1935.
8. Meaker, S. R.: Practical management of dysmenorrhea. *Boston Med. and Surg. Jour.*, 188:1000-1005, 1923.
9. Novak, E.: Treatment of primary dysmenorrhea, with special reference to organotherapy. *Amer. Jour. Med. Sciences*, 2:237, 1933.
10. Novak, J., and Harnik, M.: The psychogenic origin of menstrual colics and their treatment. *Ztsch. f. Geb. u. Gynak.*, 96:239-296, 1929.
11. Sellers, T. B.: Pain associated with menstruation. *South. Med. Jour.*, 24:2:167-175, 1932.
12. Sellers, T. B.: Dysmenorrhea, an unsolved and challenging gynecologic problem. *Transactions Amer. Assoc. Obst., Gynec., and Abd. Surg.* 273-281, 1934.
13. Sellers, T. B., and Sanders, J. T.: Infection in the "innocent-looking cervix" as a causative factor in pelvic lymphangitis. *N. O. Med. and Surg. Jour.*, 86:8:613-618, 1934.

#### DISCUSSION

Dr. G. C. Anderson: I think Dr. Sellers did well to emphasize in his conclusion that all cases should be carefully and thoroughly studied, and every other possible feature eliminated as being of etiologic importance before this operation is done. Of course, when such study has been made and the findings are all proven negative, the case would become ipso facto one of primary dysmen-

orrhoea and then we might be faced with procedures such as hysterectomy or castration and I believe resection of the presacral nerve is preferable to either of those two.

Operation on the sympathetic nervous system is certainly not new but goes back forty years to Jabouley and Ruggi whose results were fairly satisfactory but not well received. Leriche revived the subject with peri-arterial sympathectomy and his results were not entirely satisfactory. Cotte has probably done more of this work than anyone with general satisfactory results. He said that in comparing his cases in which there existed pathologic change in the pelvic organs he found that those on whom he had done a presacral sympathectomy in addition to the ordinary surgery in the pelvis, in general did better than those on whom he performed only such operations on the pelvic organs as seemed commonly indicated. He seemed to think it a valuable adjunct to the ordinary operations on the pelvic organs.

The Mayo Clinic reported fourteen cases last year and they claimed in nine of these cases there was 100 per cent recovery and in two 95 per cent and in three 75 per cent, which is indeed a remarkable record and certainly indicates the relief in that group of patients is higher than in the average.

As Dr. Sellers says, the operation carries with it the risk not only of a laparotomy but of retraction and replacement of abdominal contents to expose the nerve, and the work is close to the large vessels.

The question comes up as to function following this operation. It does not prevent menstruation. Menstruation seems to be improved in that it makes the flow freer, without saying anything about the painful side of it. Cases have been reported in which women have gone through successful pregnancies following sympathectomy. It has been shown that rabbits can produce a litter when all extrinsic nerves of the uterus have been divided. So this particular operation does not interfere with either menstruation or childbirth.

Dr. Curtis H. Tyrone: My experience with this operation has been somewhat similar to that of Dr. Sellers. I think it is an operation which is going to be used even more frequently in the future for the relief of some of the intractable cases of dysmenorrhoea.

Unlike Dr. Sellers, I still think the stem pessary has a place in the treatment of dysmenorrhoea and our results with it have justified continuation of its use. It should not be used in the woman who has developed dysmenorrhoea late in life, certainly not after the age of 30, but in younger women it is a valuable aid. I have frequently used it not only in dysmenorrhoea but in associated sterility. Dr. Sellers states the relief of dysmenorrhoea is

due to pregnancy which follows the use of the stem pessary but primarily these patients have come in complaining of sterility as well as dysmenorrhoea.

A word of caution should be expressed as to widespread use of the operation and I believe where it is combined with extensive pelvic operations giving resection of the nerve credit for relief of pain is wrong. Often dilatation of the cervix, suspension of the uterus, puncture of small cysts of the ovary, will give these patients relief and it will not be necessary to resect the nerve.

I have had four cases of carcinoma of the cervix with intractable pain and in three cases relief of the pain was obtained by this operation for a period of 5 to 6 months until death; one case died following operation. I can heartily recommend it for this condition.

Dr. T. B. Sellers (closing): In answer to the question concerning subsequent pregnancy, I wish to say that one of my patients, whose case report I did not read, delivered a normal child with less pain than usual following this operation. There are also reported in the literature numbers of other cases of normal deliveries following resection of the presacral nerve.

With reference to the stem pessary, only one man among the 319 gynecologists and obstetricians answering my questionnaire from all parts of the country stated that he secured permanent results. In my own experience, a small percentage of patients have been relieved for a period of one to two years, but 100 per cent have returned with the usual symptoms. For this reason, I conclude that in several patients who were relieved of dysmenorrhoea following the application of a stem pessary with subsequent pregnancy the relief is best explained as due to the restoration of hormone balance through pregnancy.

I agree with Dr. Tyrone, as I stated in the body of the paper, that this is a major operative procedure which should be performed by only the trained gynecologist and is applicable only to the severe, resistant type of dysmenorrhoea.

### VAGINAL HYSTERECTOMY: ITS INDICATIONS, TECHNIC AND END-RESULTS\*

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A survey of a consecutive series of vaginal hysterectomies, performed in the gynecological services of Dr. C. Jeff Miller at Charity Hos-

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pital and Touro Infirmary, from January 1932 to the present time, is herewith presented.

The indications for this operation have gradually extended, until, at the present time, it is the accepted procedure in approximately one-half of the cases in which we believe hysterectomy is necessary.

The end-results have justified this choice of operation, this statement being based on a careful follow-up, by repeated examinations and personal communication with 175 of 240 cases. This operation has been advocated for many years by Dr. C. Jeff Miller, and the technic has been perfected by usage over a period of years.

We have found that the advantages of vaginal hysterectomies are:

1. Lowered mortality and morbidity rate. In this series of cases the mortality was 3 out of the 240 cases operated on, or 1.2 per cent. In selected cases the mortality should not exceed 2 per cent. This is certainly lower than the reported rate for abdominal hysterectomy. The average number of post-operative days in the hospital was 12, which in itself speaks well for the operation.

2. There is less shock to the patient. This is especially true in the very stout patient, the elderly patient, and the patient who is a generally poor operative risk. Twenty-four of these cases were past the age of 60 years, and the fact that there is less shock is substantiated by the post-operative course of the average patient who is allowed fluids freely, and a soft diet on the day following the operation.

3. Minimum risk of infection (peritonitis), as the operation is largely extra-peritoneal and this greatly reduces the danger of intestinal obstruction and post-operative adhesions.

4. No painful abdominal scar results, and no risk of incisional hernia. This type of operation appeals to the patient, as it is a "blind" operation and avoids "cutting the stomach".

5. Rapidity of operation. The average duration of the operation is 38 minutes, including the perineorrhaphy.

6. Correction of obstetrical injuries by combining the hysterectomy with a repair of cystocele and lacerated perineum. In 6 of these

cases there was a complete tear of the perineum which was successfully repaired. 173 of the cases showed cystocele, and 162 of them gave a history of urinary disturbance, i. e., frequency, dysuria, diurnal incontinence.

The indications for the operation are:

1. Prolapse of the uterus. There were 65 cases of complete procidentia, in which the choice of operation was undebatable. We believe that in complete procidentia, vaginal extirpation, with repair of the cystocele and perineorrhaphy, is the most effective treatment for this condition, and is far superior to the old abdominal fixation operations which have no place in modern gynecological surgery. It is interesting to note that in this series of cases, 45 of the 240 cases had been previously operated on, unsuccessfully. In 175 cases of second degree prolapse, when the prolapse was associated with a diseased cervix, an irritating leukorrheal discharge, extensive obstetrical injuries, diseased uterus, and so on, amputation of the cervix, correction of obstetrical injuries, does not always relieve the patient. They are apt to return with stenosis, post-menopausal bleeding and other complications. It should be emphasized that in this group of cases, extensive disease of the cervix and uterus was present, associated with prolapse, as well as with other obstetrical injuries.

2. Fibroids of the uterus, when causing symptoms, and associated with a diseased cervix and extensive obstetrical injuries, are especially favorable cases for vaginal hysterectomy. We are not always able to determine from examination of the pelvis even under anesthesia whether the condition is one of a fibroid or an ovarian cyst. In 20 of these cases radium had been previously used without relief. Even curettage, in some cases, fails to disclose whether the fibroids are undergoing degenerative changes.

3. Fibrosis of the uterus, chronic metritis and arteriosclerotic changes in the uterine wall, with extensive cervical disease, and especially the so-called pre-cancerous cervix, and the greatly hypertrophied cervix with extension of the infectious process to the parametrium. It is often impossible to tell what examination of

the cervix and uterus will reveal. The use of the Schiller test, and study with the colposcope often disclose small ulcerations and beginning malignancy that would otherwise be overlooked. If radium and amputation of the cervix are resorted to in this group of cases, the patient often returns with pelvic pain, an irritating leukorrheal discharge, and bleeding.

4. Post-menopausal bleeding. This is often a result of stenosis of the cervix, following operations on the cervix or cauterization, degenerating fibroids, and senile changes in the uterus. These, also, are unfavorable cases for the use of radium, and we believe a hysterectomy should be done. In 49 of these cases this was the diagnosis.

Other indications for vaginal hysterectomy which could be mentioned in passing are: malignancy of the uterine body and very early cases of carcinoma of the cervix when associated with prolapse.

#### COMMENT

1. Out of 240 cases reported, 175 were followed, and of this number, 170, or 96.5 per cent, showed complete relief of the symptoms of which they had complained.

2. All cases that were examined revealed an ample vagina, with no shortening or prolapse of the anterior vaginal wall. It was only occasionally that a case complained of minor symptoms such as a slight discharge, or some frequency of urination.

3. It is more than interesting to note that in many of these cases following the hysterectomy there has been a marked improvement in general health, a gain in weight, a sense of physical well-being, and one of the things that appeals most of all to these patients is the knowledge that the possibility of cancer of the female organs has been definitely removed.

#### TECHNIC

The vagina is painted with tincture of iodine. A volsellum is attached to the cervix, and with downward traction, a circular incision is made around the cervix. A longitudinal incision in the mid-line, over the crest of the cystocele, is then made. The vaginal mucosal flaps are dissected back, and the bladder is pushed off the cervix. This is accomplished with the finger,

the plantar surface being against the cervix.

The vesico-uterine peritoneal fold presents itself as a white thickened transverse fold. This is opened with scissors and a right angle retractor is introduced through this opening to retract the bladder. The anterior surface of the uterus is then grasped with the volsellum and gradually drawn through this opening. The hysterectomy proceeds from this point as in the ordinary abdominal hysterectomy, by clamping, cutting and ligating the broad ligament structures. The uterine vessels are ligated separately, the sutures being cut short. The utero-sacral ligaments are severed and ligated, the ligatures also being left long. The posterior, or recto-vaginal septum is then severed and ligated by interrupted sutures.

The top portions of the broad ligaments, which include the round ligament and tube, are then sutured together in the midline and are further sutured to the two utero-sacral ligaments. This forms an effective closure of the vaginal vault and provides a support for the bladder.

The vesico-vaginal fascia is then separated from the vaginal mucosa and brought together in the midline and also sutured to the united stumps of the broad ligament structures. This corrects the cystocele and prevents a future prolapse of the vaginal vault and bladder. Interrupted sutures then close the vaginal incisions. Chromic No. 2 catgut is used throughout the operation.

With this technic all structures are ligated and sutured separately with a minimum loss of blood and this eliminates the danger of injury to the bladder and ureters. It must be emphasized that the vaginal vault is closed, and no drainage is required.

TABLE I  
AGE GROUPS

Age	No. of Cases
30-40 years	55
40-50 years	115
50-60 years	46
60-70 years	20
70-80 years	4
TOTAL	240

## ANESTHETIC

GENERAL .....	212
SPINAL .....	21
LOCAL .....	7

## TABLE II

## SYMPTOMS AND INDICATIONS

Procidentia .....	65
Incomplete Prolapse .....	175
Bleeding, All Types .....	193
Menopausal .....	91
Post-Menopausal .....	49
Malignancy .....	16
Uterus .....	4
Cervix .....	12
Fibroids .....	66
Fibrosis of Uterus .....	
Hyperplasia .....	
Chronic Metritis .....	142
Chronic Cervicitis .....	206
Cystocele—With Bladder Symptoms .....	173
Previous Pelvic Operations, Or Application of Radium .....	49

## DISCUSSION

Dr. Hilliard E. Miller, (New Orleans): I had the opportunity of contributing a fair number of the cases which were included in the analysis of this group of vaginal hysterectomies. So far as the results which we have obtained in this fairly large group of cases are concerned, I can only say that they have met the requirements very satisfactorily.

The indications for doing a vaginal hysterectomy have probably been extended beyond those listed in the average text-book. A fair per cent of this group is made up of cases with extensive lacerations of the cervix, erosion and eversion, cystic cervicitis, and early fibrosis in women in the late thirties. We have felt that an operation of this extent gives better results than mere amputation of the cervix, with great likelihood of the patient having to return at some future time for either radium or more surgery to correct a persistent menorrhagia.

Technically a vaginal hysterectomy becomes a comparatively simple operation after you have had sufficient experience to understand the anatomy. Considerable saving of blood may be accomplished by injecting 1 c.c. pituitrin in the cardinal ligaments prior to making the initial incision. This simple procedure produces a marked

ischemia of the pelvic structures, and allows one to reduce the uterine to a vaginal organ with comparatively little blood loss.

It is important in making the initial collar incision around the cervix to reflect the mucous membrane sufficiently far back to enable the operator to identify and secure the fascia of the pelvis and ligaments of the uterus separately. Having these two important structures identified enables one to reconstruct the pelvic diaphragm in an anatomical way after the uterus has been removed.

The fascia under the bladder can be shortened by application to eliminate cystocele, the cardinal ligaments, the utero-sacral ligaments, the recto-uterine fascia may all be stitched together, to support any laxness in the posterior vaginal wall.

Pre-operative care, I believe, is an important item in dealing with these cases. Where the cervix is ulcerated, or where an extensive infection exists, it is best to clear up these conditions by local treatments, either cautery or pessary, prior to doing any surgery at all. Chronic cystitis is a common accompaniment of prolapse and cystocele. Where a low-grade infection exists, proper attention to same should be given prior to surgical attack.

Dr. Curtis H. Tyrone, (Closing): I wish to thank Dr. Miller for his discussion. Much of my enthusiasm over this work has been due to his helpfulness and encouragement, and I am glad to acknowledge that fact.

The points Dr. Miller brought out are very well taken, especially with reference to the postoperative cystitis that some of these patients have. I believe it would be a better procedure to use the retention catheter for two or three days, which is the practice we follow in most of our cases, especially those with extensive cystoceles. This eliminates frequent catheterization and over distention of the bladder.

The amount of blood lost is negligible and never a serious problem. The technic as shown by these slides is certainly far superior to the old clamp method, where the clamps were left in place and the vaginal vault opened; and I think it is also superior to the initial clamping of the broad ligament and bringing the uterus out, we might say, by the cervix.

I believe the use of radium in non-malignant conditions at the menopause in certain cases of fibroids and menopausal bleeding is going to become more rare all the time, and that we are going to adopt this procedure more often because then we know that the patient is relieved and that she is not going to return in later years with an irritating leukorrheal discharge and postmenopausal bleeding.



PYLORIC OCCLUSION FOLLOWING  
THE INGESTION OF SULPHURIC  
ACID\*URBAN MAES, M. D.†  
NEW ORLEANS

W. W., a white male, 17 years of age, was admitted to the service of Dr. B. R. Heninger in Charity Hospital, New Orleans, January 1, 1934, a few hours after drinking a fluid which he had supposed to be wine but which actually was a solution of sulphuric acid used in fire extinguishers. It burned and choked him as it was swallowed, and a large part of it was promptly vomited. Further emesis was induced by hot salt solution. His only complaints on admission to the hospital were difficulty in swallowing and abdominal cramps on the ingestion of food, in addition to a slight, pre-existent chest cold. Except for inflamed tonsils and occasional rales in the bases of both lungs, the physical examination revealed only raw, ulcerated areas in the mouth and on the tongue, and vague epigastric tenderness.

The patient remained in the hospital for five days. He was treated for his cold by the standard measures and received, in addition, olive oil in three ounce quantities at regular intervals. The admission temperature of 101.5°F., which was probably due to the bronchial condition, promptly fell to normal, as did the somewhat accelerated pulse rate, and he was discharged apparently cured.

Nine days after his discharge, this being two weeks after the acid had been swallowed, the patient began to vomit his food, at first occasionally and finally constantly, within two hours after each meal. Only small quantities of fluid could be retained, and when he applied for re-admission, nineteen days after his discharge and ten days after vomiting had set in, he had lost 15 pounds. Bowel function was irregular and the stools were small, but no other untoward symptoms had occurred, and physical examination revealed nothing of note.

Radiographic examination was done without delay on a clinical diagnosis of functional dyspepsia versus chemical gastritis, and revealed a constant filling defect of the pyloric end of the stomach and duodenal cap, with a 40 per cent gastric residue at the end of six hours. Fluoroscopic examination done a week later, after antispasmodic medication of atropine and belladonna, confirmed the radiographic findings. Gastric analysis showed free hydrochloric acid 12 per cent and total acidity 30 per cent.

The patient was put on a Sippy diet and improved markedly for several days. Then vomiting recurred, and he was transferred without further delay to the surgical service of Dr. Shirley C. Lyons, where he was prepared for gastro-enterostomy.

Operation was done February 14, six weeks after the ingestion of the acid, under ether anesthesia and through a midline incision. Just anterior to the pylorus was a large, inflammatory mass, the peritoneal layer of which was markedly congested and injected. Careful exploration revealed no other abnormalities. Posterior gastrojejunostomy was done without difficulty, the stomach being freely movable and no clamps being used. Convalescence was uneventful except for a slight chill on the second day, probably due to a mild reaction from the infusion just given. Full liquids were given on the fifth day and soft diet on the seventh, and the patient was discharged in excellent condition on the fifteenth postoperative day. He has failed to reply to letters of inquiry, and we have, therefore, no follow-up on the case.

The ingestion of corrosive liquids, whether accidentally, as in this case, or with suicidal intent, is a fairly frequent occurrence, the results of which vary from slight ulcerations in the mouth to the type of gastric lesion just described. Esophageal stricture is generally considered to be the result, and it is not always remembered that such agents have a selective action, and that certain of the commercial acids may do no injury to the esophagus, improbable as that seems, but may cause immediate death by gastric perforation, or may give rise to pyloric obstruction, or, more rarely, to a generalized ulceration of the gastric mucosa. McLanahan of Baltimore, in a recent excellent and comprehensive review of this subject, quotes Samaja to the effect that tetanic contractions set up in the gastric wall tend to concentrate the corrosive acid at the pylorus, which seems a reasonable explanation.

The characteristic pathology in these cases, McLanahan points out, is the formation of a dense, cicatricial mass at the pylorus, which gives rise to symptoms of obstruction usually within a month after the acid has been swallowed, though they may be deferred for five or six years. Surgical measures are indicated, the mortality depending upon the promptness with which they are instituted, and while manual dilatation of the pylorus, resection of

\*Presented before the Orleans Parish Medical Society May 27, 1935.

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the pylorus and pyloroplasty have all been advocated and employed at one time or another, gastroenterostomy is the most reasonable and most satisfactory operation unless the patient's condition is such that preliminary jejunostomy for feeding purposes is indicated.

The personal case reported by McLanahan is interesting and unusual enough to be quoted. Hydrochloric acid was swallowed by a fifty-five year old man, who promptly vomited it and who was brought to the hospital and received adequate treatment without undue delay. He steadily improved and was discharged without symptoms 16 days later. In the meantime however, fluoroscopic examination five days after admission had showed a mild gastritis, and roentgen ray study a week later had showed a narrowing of the pyloric antrum, which further study, a week after his discharge, showed to have progressed still further. Even though obstructive vomiting was absent, and the probability was that the obstruction was due to the ingestion of the acid rather than to malignancy, an exploration was considered warranted, and was done a month after the acid had been swallowed. The findings paralleled those in the case just reported from our own service, a large inflammatory pre-pyloric mass covered with injected peritoneum. A posterior gastroenterostomy was done, with excellent symptomatic results. An enlarged lymph gland removed at operation was reported as inflammatory.

The interesting feature of this case is the fact that nineteen months after operation the patient suffered injuries in an automobile accident, to which he succumbed, and autopsy was permitted. The gastroenterostomy opening was found to be 1 1/2 inches in diameter, while the pyloric antrum was found completely obliterated; even when the stomach was filled with water, no fluid could be forced into the duodenum. There was no evidence of ulceration or new growth, and microscopic study showed the pyloric structures to be atrophic and fibrotic. Quite evidently, as McLanahan points out, surgery must be done promptly in such cases, for, as these autopsy findings prove, the stenosis apparently grows worse instead of

better as time passes, even though the cicatricial mass may decrease in size or entirely disappear.

McLanahan, Samuel: Pyloric occlusion following the ingestion of corrosive liquids. J. A. M. A. 102:735-739, 1934.

## THE EARLY RECOGNITION OF CARCINOMA OF THE COLON AND RECTUM\*

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NEW ORLEANS

Malignancies of the colon and rectum occupy fourth place in order of frequency in all malignancies and, because an early diagnosis of this condition rests principally with the practitioner, I feel that a more frequent discussion of the subject is pertinent. Unfortunately, it is not possible to outline any fixed symptomatology by which a diagnosis in the very early case may be made, and it is only through critical studies of substantial groups that our knowledge of its early manifestations may be clarified. In this paper I have reviewed the records of 209 cases of malignancies of the colon and rectum and investigated by other means a great percentage of the cases and from these have attempted to point out salient features which may be of value in keeping us alert for early involvements. It must be borne in mind that the data is taken from a general hospital where the admission includes a great number of physicians and is a cross section of various methods of handling these patients. The number of males studied were 115 and females 94. The age incident would seem to be of considerable importance, since 86 per cent occur beyond the 41st year:

### YEARS

10-20.....	.9 per cent
21-40.....	13.1 per cent
41-50.....	15.9 per cent
51-60.....	33.5 per cent
61-70.....	24.5 per cent
71-80.....	11.9 per cent
81- beyond.....	1.3 per cent

### PATHOLOGY

Sarcoma of the colon apparently occurs very

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rarely and is noted in only two incidents, both prior to the fortieth year. The remaining lesions were carcinomas, and were divided into two principal groups, Scirrhus Carcinoma and Medullary Carcinoma.

#### SCIRRHUS TYPE CARCINOMA

The scirrhus carcinoma has as its striking microscopic features the predominance of fibrous tissues with scattered islands of carcinomatous cells and consequently is of a firm consistency. From its beginning, as a smooth indurated area involving the mucosa only, it tends to spread with the transverse axis of the bowel, gradually encircling the gut in the so-called "napkin-ring" fashion. The margins remain clear cut and the adjacent tissues appear quite normal. Because of this apparent fixation and non-elastic area, impaction of feces and dilatation above the lesion tends to occur frequently with resulting obstruction and occasional intersusception into the lower segment. Involvement of the adjacent tissues occurs slowly and the lesion remains local until late when it is more frequent that serious complications attract the attention of the patient and bring him to the physician.

#### MEDULLARY TYPE CARCINOMA

This type frequently had its origin in the supposedly benign polypoid growths. It is fairly well established among pathologists that in these apparently innocent lesions, malignant degeneration is frequently encountered. As the medullary carcinoma grows it presents strikingly different characteristics from the scirrhus types. Growth is more rapid and because of the failing blood supply necrosis and ulceration occurs earlier. The margins become irregular and frequently assumes a cauliflower appearance. In the early stages there is a softness to the touch. It bleeds easily, and seldom tends to encircle the bowel, but rather to project as isolated masses into the lumen. Later, as the infiltration of the adjacent tissues occurs, a segment of the circumference of the bowel may be involved and have a firm indurated feel, but obstruction is not the rule, and metastasis may occur before the colonic function is affected sufficiently to call the patient's attention to the particular area involved.

#### LOCATION OF LESIONS:

Rectum .....	45.0 per cent
Sigmoid .....	29.7 per cent
Descending Colon .....	4.5 per cent
Splenic Flexure .....	1.35 per cent
Transverse Colon .....	2.7 per cent
Hepatic Flexure .....	1.35 per cent
Ascending Colon .....	4.5 per cent
Cecum .....	9.45 per cent

#### SYMPTOMATOLOGY

There is no definite set of symptoms or a syndrome which may be taken as diagnostic of malignancy of the colon and rectum; yet there are certain clinical features in the history of these patients which, if kept in mind, may arouse suspicion and stimulate a more careful investigation. The colon, by reason of its function, has been clinically divided into two parts; the right half in which the absorptive function predominates, and the left half which has to do more with motor activity and propulsion of the fecal column. Depending on the particular area involved, the symptoms may vary widely. In those with lesions in the cecum and ascending colon there is a tendency for reflex disturbance of the upper intestinal tract to occur and it is particularly significant that in 26 per cent of the cases reviewed a diagnosis of appendicitis has been made. 90 per cent of these patients complained of pain and discomfort in the right lower abdomen for varying periods from two to nine months, 44 per cent complained of nausea, eructation, fullness after meals, and lower abdominal distention. A palpable mass in the right side was recorded in only 30 per cent, and 15 per cent had noticed blood in their stool. The traditional diarrhea and constipation was conspicuous by its absence, 27 per cent giving the history of diarrhea; 30 per cent constipation, and in 43 per cent no particular alteration in the colonic function was recorded or could be established otherwise. In the left half of the colon, where the lumen of the bowel is smaller and the fecal content more formed, the clinical systems differ sharply. 83 per cent were conscious of some disturbance in the motor function. 53 per cent complained of a persistent and increased constipation, whereas they had previously been normal. 17 per cent developed a



diarrhea, and only 13 per cent experienced periods of diarrhea and of constipation. The presence of blood in the stool was recorded in 58 per cent, whereas with rectal cases alone the appearance of blood was universal. Pain is a prominent symptom when the descending colon and sigmoid are involved but 88 per cent of the patients we were able to check carefully complained of discomfort in the lower quadrant radiating across the abdomen long before actual pain is experienced. 61 per cent of the rectal involvements had pain referable to the rectum and perianal region; the exceptions being lesions in the rectal ampula where often the first knowledge of rectal disease was a sudden hemorrhage. Loss of weight and cachexia is not a prominent feature in the early colon case, and certainly does not become apparent early in the disease; however, there is a greater tendency for these features to appear when the right half of the colon is affected, probably because of the greater absorptive function and excessive bacterial action, as suggested by Alvarez.

Points deserving of special attention are that these patients should have had their disturbances an average of eleven months before admission to the hospital; that 82 per cent of those operated showed evidence of metastasis, while 17.4 per cent of the total number have been treated for dysenteries; 18 per cent of the rectal cases had undergone treatment for hemorrhoids for varying periods of time. It is important that any patient approaching middle life or beyond the age of fifty, who suddenly develops some disturbances in the motor function of the colon or complains of vague discomfort, especially in the lower abdomen, should immediately arouse the suspicion of malignancy in the minds of the average practitioner. It is possible that the recent development of less trying methods in the treatment of amebiasis accounts for the high percentage treated for dysentery, yet one is hardly justified in treating a diarrhea as an amebic infection without an attempt being made to find the organism, much less to continue along this line for months when results are not forthcoming as was noted in a few instances. It is significant that 44 per cent of the cases with path-

ology in the right half of the colon complained of epigastric discomfort, soreness, dull pain in the right iliac fossa, and 26 per cent had a diagnosis of appendicitis. This should make one proceed cautiously with the individual falling within the major age limits who presents symptoms of appendicitis. The presence of a palpable mass is often only a signal that the diagnosis has been made too late.

#### Metastasis evident in those

operated .....82.0 per cent

#### Average duration of symptoms

in months ..... 11

#### Percentage of total number

treated for dysentery.....17.4 per cent

#### Rectal cases treated for

hemorrhoids .....18.0 per cent

#### Symptoms referable to upper

gastro-intestinal tract in

right sided developments.....49.0 per cent

#### DIARRHEA AND CONSTIPATION

#### RIGHT HALF OF COLON:

Diarrhea .....27 per cent

Constipation .....30 per cent

Diarrhea and constipation..... 9 per cent

#### LAST HALF OF COLON:

Diarrhea .....17 per cent

Constipation .....53 per cent

Diarrhea and constipation.....13 per cent

#### Patients becoming colon con-

scious before pain is

experienced .....88 per cent

#### PRESENCE OF BLOOD IN STOOLS:

Ascending colon.....18 per cent

Descending colon and sigmoid.....53 per cent

Rectum and anus.....100 per cent

#### DIAGNOSIS

With all the symptomatology and history in both the early and late cases, we are served with only a clue as to the actual nature of the trouble, and the diagnosis must remain unmade unless further methods are employed; an adequate examination including roentgenologic studies, digital examination, and sigmoidoscopy, should be made in every suspected case.

#### ROENTGENOLOGIC EXAMINATION

In the colon particularly does the roentgen

ray lend itself most admirably in demonstrating organic pathology, and gives more positive evidence of the nature and the extent of involvement than is possible without an actual biopsy; yet the roentgenologic examination made with the most perfect technic and expert interpretation will fail to reveal a new growth in certain instances. The barium meal administered orally and followed through the digestive tube until visualization of the colon is obtained is probably the best routine method of examining the gastro-intestinal tract, yet it is much less effective in revealing organic pathology than the barium enema or its modifications. The colon is often incompletely filled with barium and spasms as well as congenital and acquired adhesions may distort the colon so as to simulate organic lesions. An imperfect mixture of the feces and barium with gas pockets and irregular distention of the colon has been misinterpreted. It is well agreed among radiologists that the barium enema is the method of choice in demonstrating organic changes within the colon, and certainly this holds true above the sigmoid flexure. Certain refinements in technic, as pointed out by Fisher, Weber, Feldman, Berg, and others, has aided much in overcoming many objectionable features. It is hardly within the scope of this paper to discuss the detailed technic of examination and the differential diagnosis from the roentgenological standpoint, but I feel that as clinicians we should cooperate more earnestly with the specialist in this field. We should be thoroughly conversant with the salient features of an adequate examination, such as the proper preparation of the patient. The colon should be emptied thoroughly, preferably with a dose of castor oil administered at bed time, the evening before the expected examination. The following morning one or two saline enemas should precede the examination by two hours. The barium mixture should be of a consistency capable of outlining the colon adequately and administered at body temperature, since the colon frequently reacts violently to cold enemas. There is no doubt that a combination of fluoroscopy with roentgenography yields the more accurate information, and if the solution is allowed to pass slowly into the colon

with each segment being carefully fluoroscoped as the barium flows, the chances of overlooking small lesions are minimized. Probably the most important of all the modifications of this procedure is the "double contrast" method popularized by Weber and others. This technic properly applied and in selected cases, will delineate more mucosal pathology than any other method. Its correct application and interpretation has not yet advanced to the point where routine employment is justified, however, and it finds its best application, as Feldman has pointed out, in visualizing overlying loops, polypi, and early ulceration of the colon.

#### DIGITAL EXAMINATION

This simplest of all diagnostic procedures in the examination of the digestive cases, is probably the most neglected. It is all too frequent that we find patients complaining of rectal discomfort and being subjected to roentgen ray examinations, who have yet to have a digital examination. This should be a routine procedure, especially since 90 per cent of rectal and anal carcinomas may be discovered by this method alone. With the patient placed in the lithotomy position and employing a bimanual technic, lesions as high as the recto-sigmoid juncture, and occasionally in the sigmoid itself, may be palpated with the examining finger. The feel of the soft cauliflower, as well as the indurated mass, is unmistakable and with little experience the examiner's suspicion is aroused. It is well to bear in mind that carcinomas of the rectum start as lesions of the mucosa and alterations in this tissue are always demonstrable, whereas in lympho-granuloma inguinale, its most frequently confused entity, the mucosa is usually intact and the lesion is primarily a perirectal involvement. The presence of blood on the examining finger should always call forth a further investigation; however, it must be borne in mind that the size of the lesion and the amount of induration is not an adequate criteria to the actual damage done. The importance of this simple procedure cannot be over emphasized.

#### SIGMOIDOSCOPIC EXAMINATION

While it is proven that from 70-88 per cent of the lesions of the rectum and sigmoid may

be demonstrated by this method, it is astonishing that so few in the series 15 per cent had a record of such an examination having been made. The simple technic of sigmoidoscopy is not beyond any physician, and much valuable time may be saved in the suspected colon cases if this was carried out routinely. The preparation for this examination is simple in that only a cleansing enema one or two hours prior to the examination is required to give a clear view of this segment of the bowel, and with the patient in the knee-chest position, the scope may be advanced to the sigmoid area under the direct vision of the examiner, without the aid of air insufflation in the majority of cases. I do not feel that one is justified in advancing the scope beyond the rectum blindly since perforation of the colon by this technic is a possibility and instances have been recorded of such accidents. The advisability of taking a specimen for biopsy in the suspected cases, has been questioned, yet this procedure may be justified in view of the serious nature of the surgery necessary should a malignant growth be present.

#### SUMMARY

Two hundred and nine cases of carcinoma of the colon and rectum have been reviewed. 82 per cent of those operated showed metastasis. 84 per cent occurred before the 41st. year. Loss of weight and cachexia was not a prominent symptom until late. 26 per cent of those in the right half of colon had diagnosis of appendicitis. 88 per cent of those with lesions on the left side we were able to carefully check, complained of being colon conscious before actual pain was experienced. 44 per cent had symptoms referable to upper gastro-intestinal tract. 17.4 per cent had been treated for dysentery and 18 per cent had undergone treatment for hemorrhoids. Adequate examination should always include roentgenologic studies, sigmoidoscopy, and digital examination.

#### BIBLIOGRAPHY

1. Lahey, F. H.: Diagnosis and management of carcinoma of colon and rectum. *N. Y. Journal Med.* 34:129-137, 1934.
2. Feldman, M.: Early diagnosis of carcinoma of colon roentgenographically considered. *Radiology.* 22:493-498, 1934.
3. Samuel, E. C., Bowic, E. R.: Role of roentgenologist in malignancy. *New Orleans Medical and Surgical Journal.* 86:533-535, 1934.

4. Rosser, C.: Diagnostic criteria of rectal cancer. *Am. J. Dig. & Nut.* 1:141-143, 1934.
5. Ogilvie, W. H.: Early Diagnosis of carcinoma of rectum. *Practitioner.* 13:163-171, 1933.
6. Weber, H. W.: Carcinoma of Colon: its roentgenologic manifestations and differential diagnoses. *Am. J. Cancer.* 17:321-341, 1933.
7. Wrigley, P. R.: Symptoms, diagnosis, and treatment of carcinoma of colon. *Clin. J.* 62:63-69, 1933.
8. Fischer, A. W.: Contrast suspensions enema and insufflation of colon for roentgenical examination. *Klin. Wehusehr.* 11:1595-1598, 1923.
9. Alvarez, Walter C., Judd, E. Starr, Mae Carty, William C., Zimmerman, Arnold R.: The varying degrees of anemia produced by carcinoma in different parts of the colon. *Arch. of Surg.* 15:402-17, 1927.

#### DISCUSSION

Dr. Robert Kapsinow, (Lafayette): I just want to quote the opening passage of Dr. Browne's paper: "Malignancies of the colon and rectum occupy fourth place in order of frequency in all malignancies and because an early diagnosis of this condition rests principally with the practitioner I feel that a more frequent discussion of the subject is pertinent." In several years of active gastro-intestinal practice, I have yet to see an early case of carcinoma come to operation and the patient offered anything like a reliable prognosis.

Constipation is the most common gastro-intestinal complaint. The majority of patients with dyskenesia fall into the class due to faulty diet or poor habits. Patients come to our office asking for more cathartics. They are simply too lazy to sit down and do their duty. With all the promiscuous advertisements extolling the virtues of the multitudinous remedies hurled at the laity it is strange that not a word of caution is offered that the constipation may be due to cancer. Apparently these fly-by-night drug companies do not desire to suggest this warning for then the patient might see his family doctor and the doctor in an effort to exclude cancer might not use that specific drug. The same might be applied to the "bleeding pile" remedies. It should not be forgotten that most cases of cancer of the rectum are associated with hemorrhoids. Personally, I do not inject hemorrhoids. First, be sure that they are just hemorrhoids, and then go ahead and cut them out. I have seen in the past three years four cases of carcinoma of the rectum that had been injected for hemorrhoids and got excellent cures of the hemorrhoids and died of metastases to the peritoneum.

The text-book picture of the cachectic, dehydrated individual with a mass in the abdomen must be forgotten if we are to diagnose early cancer of the lower bowel. Eight out of ten of these are inoperable.

In brief, the diagnostic evidences of cancer of any segment of the colon depends on the following early symptoms: (1) change in bowel habits, as evidenced by increased irritability such as diar-



rhea which the lay person has learned to call mucus diarrhea, alternating with constipation; (2) localizing pain or tenderness not of marked severity, but with persistency; (3) tumefaction; (4) profound anemia not associated with blood loss; and (5) acute, subacute, or chronic obstruction.

With symptoms such as any one or more of these, the patient is entitled to: (1) careful examination of the abdomen, pelvis and rectum, including a stool examination for blood; (2), digital palpation of the rectum followed by a proctoscopic, for roentgen ray does not often reveal cancer of the rectum or lower sigmoid; (3) barium enema followed by a double contrast picture; and lastly, a barium meal only after the former have been completed.

I wish to offer a special plea for the easy yet most often forgotten rectal examination. When one realizes that 60 per cent of cancer of the lower bowel occurs in the rectum or lower sigmoid and that it also represents 5 per cent of all cancer and also that because cancer of the rectum is slow growing with late metastasis, which in the early state is easily operable with an excellent prognosis, it seems a pity that this easy and yet profitable examination is so often neglected.

Dr. J. W. Warren: I just wish to take exception to what the gentleman said about injection of hemorrhoids. I have injected over 2000 cases and have never seen one develop carcinoma, and have been in contact with men who have injected 5000 or 6000 cases and they have told me the same thing. Of course, if carcinoma is present in the rectum injections will not cure it and the patient may die anyway.

Dr. Donovan C. Browne, (In conclusion): I wish to thank Dr. Kapsinow for his discussion and careful summation of many of the salient points in the diagnosis of malignancy of the lower bowel. I am sure his latter remarks were not directed to any particular method of treatment of hemorrhoids, certainly not as a cause of malignancy of the rectum but rather to stress the importance of a more thorough examination of the patient with hemorrhoids before treatment of any type is instituted.

## AGRANULOCYTIC ANGINA

### Report of Two Recent Cases in Children\*

PHANOR L. PEROT, M. D.  
MONROE, LA.

The disease known as agranulocytosis was described as a clinical entity only twelve years ago. Shultz,<sup>1</sup> reported a peculiar type of ne-

crossing angina with marked absolute and especially granulocytic leukopenia. To this condition Schultz gave the name of agranulocytosis; later Friedman changed the designation to agranulocytic angina. It would seem that Schultz's original terminology is the more fitting.

The first in the U. S. was reported 10 years ago by B. Lovett,<sup>2</sup> since that time it has been constantly on the increase and being recognized more readily. Some investigators, O. H. Pepper,<sup>3</sup> report that this disease was quite common many years ago. Instances of so called putrid sore throat or malignant angina, are cited but this assumption is entirely unwarranted, since the single diagnostic criterion, namely a granulopenia, was lacking in these cases. To state otherwise would be to reflect on the diagnostic acumen of our clinicians of the past since blood counts have been taken for the past fifty years. We must consider, then, that granulopenia is a disease of modern time and one that has come among us during the past twelve years.

The onset is with malaise, general aches and pain, headaches, high temperature (100° to 105°) and is of continual type with rapid pulse. Either at the onset, or very shortly afterwards, there are symptoms and signs of local infections of which the throat is the commonest site. Mucous membranes of the gastro-intestinal tract, respiratory and urogenital tracts may be involved. There may be brawny induration in the subcutaneous tissues. The cervical lymph glands may or may not be involved.

The patient is extremely toxic and may be delirious. Death occurs in from a few days to a few weeks. Recoveries are rare, several cases reported cured from the first attack have died from attacks later on.

The blood count typically shows a reduction in the total white cells with extreme reduction of the granulocytes which in severe cases may be entirely absent. The red cells and platelet counts are usually within normal limits. The local lesions show mixed infection, the blood culture usually negative. All the toxic manifestations are regarded as secondary to the absence of granulocytes. The granulopenia has

\*Read before the Louisiana State Medical Society. New Orleans, April 29—May 1, 1935.

been shown definitely to precede the toxic manifestations. On mucous membranes, the most characteristic lesions are ulcers covered with greyish-white membrane in the mouth; the tonsils, pharynx, palate, gums, and tongue may all be involved. There may be extensive gangrene. The indurated subcutaneous lesions may slough, but pus does not form while the blood is agranulocytic. Jaundice occurs in some cases, subcutaneous hemorrhages or bleeding from the mucous membranes do not occur, except that occasional petechial spots may sometimes be found. Albuminuria is usual.

The etiology of agranulocytosis has not yet been proved. Bacteria, in Lovett's case the presence of mouth ulcers infected with *B. pyocyaneus* was noted. She injected numerous laboratory animals but failed to produce the condition. Similar observations were made by others (Linthicum, Windham, Friedman). Blood cultures are positive in about 20 per cent of cases. The staphylococci are the most frequent invaders. The blood stream infection is probably secondary to the leukopenic state. There is little support for the bacterial etiology of granulopenia. It has been well demonstrated by Robert and Kracke that the basic pathology is, first, the disappearance of the neutrophils, which in turn is followed by the invasion by any and every organism accessible, particularly throughout the entire length of the gastro-intestinal tract. Most writers are in accord with the conception that granulopenia is, first, a disease of the bone marrow followed by a disappearance of peripheral granulocytes, this in turn followed by varying degrees and types of infectious processes. Granulopenia is a non-bacterial disease with a bacterial ending.

Drugs, according to Roy R. Kracke,<sup>4</sup> the chief etiologic factor in granulopenia is the administration of certain classes of drugs, especially those which contain the benzene ring as their central nucleus. The following drugs reported as suspected etiology: amidopyrine, allonal, sodium amytal, amidopyrine, neonal, amidophen-phenobarbital, peralga, phenacetine, acetanilid, nearsphenamine, amytal compound, solganol and crisalbine. It is of interest that most of these drugs were introduced about 1922.

The gold salts, arsephenamine, amidopyrine and phenacetine have certain structures in common, namely, the benzene ring with the attached  $\text{NH}_2$  or amine group, the latter group facilitates the ease of oxidation. The end and by-products of oxidation of these drugs are thought to be responsible for the depressant action upon the bone marrow. The gold salts, reports of granulopenia following these drugs are quite common in France, where they have the widest usage by Lande and Jacquelin.

Dr. R. P. Irwin,<sup>5</sup> of Moulton, Ala. records a typical case following typhoid vaccination. Madison and Squier,<sup>6</sup> reported a series of fourteen cases of granulopenia, which they concluded were probably due to the use of "benzene chain derivatives". All patients were physicians, nurses or patients under physicians care. C. H. Watkins,<sup>7</sup> reports a series of thirty-two cases of primary granulopenia that have been observed at the Mayo Clinic, of this group twenty-four had taken amidopyrine, or a derivative of barbituric acid for varying periods before the onset of the disease. Hubble,<sup>8</sup> states that it is the result of glandular dysfunction, and that the bone marrow depression may be caused by a pituitary basophilic insufficiency and by cortical adrenal dysfunction.

In the clinical development of granulopenia, it is necessary to presuppose the existence of a previously weakened, damaged, or idiosyncratic bone marrow which may be congenital or acquired.

The disease is essentially one of the white race, it exists in the ratio of two females to one male. The disease is extremely prevalent in physicians and their relatives, nurses and hospital employees. The average age is between forty and fifty years, and ranges from one year to eighty. It is therefore, a disease of middle age.

The diagnosis of agranulocytic angina depends upon the blood picture. A blood count should be done as part of the investigation of all peculiar toxic states and especially before all operative procedures, as cases have been reported following teeth extractions and tonsillectomies, also, in cases with unusual infective lesions, especially of the mouth and throat. Granulopenia must be diagnosed early if the mortality is to

be reduced. There should be more critical cytologic examinations of the blood, as the patient is ill from several days to several weeks or months before the onset of the acute stage. Once the fact of granulopenia has been established, it remains to determine by a process of exclusion that the granulocytopenia really is primary and not merely a secondary manifestation of other conditions.

The differentiation from acute aleukemic leukemia may be extremely difficult and depends upon the absence of hemorrhages in agranulocytic angina. The normal red cell count exclude the primary and secondary anemias.

Acute follicular tonsillitis, Vincent's angina and diphtheria are to be differentiated by appropriate clinical means and routine leukocyte and differential count, none of these conditions causes a leukopenia. Streptococci sore throat and streptococcus haemolyticus septicemia occasionally have leukopenia but rarely less than 4500, with at least 85 per cent neutrophils. Typhoid fever and influenza, total count rarely less than 4000.

#### TREATMENT

A review of the literature indicates that most authors believe that a specific and satisfactory treatment has not been discovered. Employment of any drug or agent that will stimulate maturation of the granulocytes and cause their delivery to the circulating blood in the shortest time possible as: Extract of bone marrow, liver extract, Squibbs leukocyte extract, raw fetal liver and fetal calf spleen, transfusions and irradiation of long bones, nucleotide therapy<sup>9</sup> and calcium gluconate. The treatment of the local lesions should be with cleansing solutions as saline and soda, potassium chlorate, potassium permanganate with removal of membranes.

With reference to drugs, Dr. Irma Jones,<sup>10</sup> reports a case of agranulocytosis occurring in a physician's wife, with complete absence of granulocytes for three (3) days. Recovered with liver extract and pentose nucleotides and was given sodium-amytal in large amounts and repeatedly for rest during the entire illness and still takes sodium-amytal at times for head-

aches. The blood counts remained practically normal throughout the past two years.

#### CASE REPORTS

Case No. 1. A white male child, aged 3½ years was admitted to hospital on January 24, 1935 with the following history:—In November the child suffered with a mild anemia due to dietary indiscretion. Blood examination at that time showed red cells 3½ million, total leukocytes 6000, with 70 per cent polymorphonuclears. No other abnormalities noted.

Family history of no importance.

The anemia cleared up after treatment and was apparently well until four days before admission, January 24, 1935. At this time, the child suffered a mild cold and sore throat, and two days later developed a severe infection of throat, left side of cheek, and glands of neck became swollen, with high fever.

On entrance to hospital the following was noted:—Patient acutely ill, with temperature 104°, respiration 30, pulse 160. Left cheek swollen, submaxillary, sublingual, and cervical glands enlarged. Buccal mucous membrane, gums, tongue, tonsils, and pharynx covered with a dirty greyish white membrane, with an offensive odor. Nasal passages contained mucoid secretions but no pus. Slight edema lower left eyelid. General physical examination showed nothing of note.

Laboratory Findings:—Urinalysis shows trace of albumin with few hyaline and granular casts.

Red cells, 3,180,000; haemoglobin, 55 per cent; total leukocytes, 2,500; platelets, fairly abundant; lymphocytes, 70 per cent; monocytes, 16 per cent; polymorphonuclears, 14 per cent. No malaria. Smear and culture from throat shows many gram positive and negative, cocci and bacilli. No spirochetes.

January 25, 1935. Red cells, 3,000,000; total leukocyte, 1500; haemoglobin, 55 per cent; lymphocytes, 80 per cent; monocytes, 10 per cent; polymorphonuclears, 10 per cent. Culture from throat showed mixed infection as of January 24, 1935.

Treatment:—Edwinil 1 cc every four hours. Liver extract every 4 hours by needle. Neolacmanaese 1cc by needle. Cleansing solutions soda bicarbonate, potassium, chlorate and soda perborate and removal of membranes from pharynx. Temperature continued to rise 106° and child died.

Case 2. White male child, aged 6 years was admitted to hospital January 29, 1935 with the following history:—Two weeks ago, tonsils were swollen, gradually growing worse with some difficulty in swallowing; was seen by local physician and diagnosed as diphtheria.

January 25, 1935, 40,000 units diphtheria anti-



toxin was given. January 26, 1935, 20,000 units and January 27, 1935 20,000.

Sent to hospital as a case of diphtheria, probably needing a tracheotomy. Admitted to hospital January 29, 1935, following was noted:—Family history of no importance.

Well developed and nourished male, with slight dyspnea, left side of cheek slightly swollen, lower eyelid of left eye slightly edematous. Submaxillary, lingual, and cervical glands enlarged. Mucous membrane of entire buccal cavity, tongue, tonsils, pharynx covered with greyish membrane, with an offensive odor. Both nasal passages filled with mucoid secretions. General physical examination showed nothing of note.

Temperature 103°, pulse 130, respiration 25.

The throat lesions in this case was identical in appearance as in case No. 1, of four days previous and I immediately made a clinical diagnosis of agranulocytosis.

Laboratory findings:—Smear and culture from throat and nose shows many gram positive, gram negative cocci and bacilli. No spirochetes. No malaria. Blood culture negative.

Red cells, 3,680,000; haemoglobin, 60 per cent; lymphocytes, 84 per cent; monocytes, 4 per cent; polymorphonuclears 12 per cent; total leukocytes, 1,600; blood platelets, 200,000; color index 8.

January 30, 1935. Red cells, 3,100,000; total leukocytes, 2,000; lymphocytes, 70 per cent; monocytes, 3 per cent; polymorphonuclears, 27 per cent. Temperature 103°, pulse 140, respiration 28.

January 31, 1935. Red cells, 3,000,000; color index, .8; haemoglobin, 60 per cent; total leukocytes, 5,000; lymphocytes, 80 per cent; polymorphonuclears, 20 per cent. Temperature 103°, pulse 140, respiration 30.

February 1, 1935. Total leukocytes, 5,000; lymphocytes, 74 per cent; monocytes, 3 per cent; polymorphonuclears, 23 per cent. Temperature 105°, pulse 145, respiration 40.

Culture from nose and throat shows the usual bacterial flora. No spirochetes. Urinalysis shows a small amount of albumin.

Treatment:—The removal of plaques of membrane from tongue, soft palate and pharynx facilitated breathing. On several occasions it looked like a tracheotomy was needed, but after removing large particles of membrane from pharynx, breathing was established. Portion of tonsil and soft palate sloughed. Tincture of benzoine in croup kettle. Infra red light. Irrigation with soda and saline. Potassium permanganate and potassium chlorate and hydrogen peroxide. There was no bleeding or pus formation under these areas. Liver extract and glucose intravenously.

In spite of the increase in the granulocytes (mostly of the immature type) the patient died.

#### REFERENCES

1. Schultz, W.: Ueber eigenartige halskerangungen, Deutsche med. Wehnscher. 48:1494, 1922.
2. Lovett, B.: Journal A. M. A. 83:1498, 1924.
3. Pepper, O. H.: Leukopenia, Col. & West Medical, 35:82-173, 1931.
4. Kracke, Roy R.: The etiology of granulopenia (agranulocytosis) with particular reference to drugs containing the benzene ring. Am. Journal Clinical Pathology 4, 1934.
5. Irwin, R. P.: Personal communication (Dr. Kracke) 1933.
6. Madison, F. W. and Squier, T. L.: The etiology of primary granulocytopenia (agranulocytic angina) Jour. Am. Med. Assn. 102:755-759, 1934.
7. Watkins, C. H.: The possible role of barbiturates and amidopyrine in causation of leukopenic states. Proc. Mayo Clinic, 8:713-714, 1933.
8. Hubble, D.: Endocrine system in blood disorders. The Lancet, 125:133, 1933.
9. Marriot, H. L.: Agranulocytic angina and pentose nucleotide, The Lancet, 226:448, 1934.
10. Jones, Dr. Irma: Agranulocytic angina, report of a case. Staff meet. St. Frances Sanitarium, 1933.

#### DISCUSSION

Dr. A. L. Levin (New Orleans): The subject of agranulocytic angina is of great interest to me; I have come across two cases in the past eighteen months. The first was a child eight years old, treated for a sore throat six weeks before I saw the case. She was discharged after two or three days treatment and permitted to go to school. The parents phoned that the child was desperately ill, vomiting, purging and having a very high temperature. I examined her carefully; examined her throat which showed no lesion, just a redness; there was however a peculiar hyperemia of the gums and of the mucous membrane of the nose for about two inches from the outer border. The abdomen was markedly distended. In questioning about the previous history of the case, the mother told me that he child had been under treatment for the past 6 years for celiac disease. Periodically, she developed temperature and diarrhea. A blood picture was made immediately and my technician remarked that she could not find any neutrophils and the leukocytes had dropped to about 1200. Dr. Lejeune examined the child and verified my suspicion that this was a case of agranulocytic angina. The child was rushed to the hospital with a temperature of 103° and during the night it rose to 105°. Further careful examination of the child did not reveal any lesions. The rectal mucous membrane was hyperemic but no ulcers were present. Treatment for agranulocytic angina was instituted; pentnucleotide and liver extract was used. The child recovered and is still being kept under observation.

The second case was referred to me about four or five months ago. This patient had a tooth extracted by a dentist and forty-eight hours later she developed a temperature of 105°, and became desperately sick. The doctor who attended her made a blood count and found no neutrophils

present. He referred the case to me with a diagnosis of agranulocytic angina. On examination, I noticed a sloughing of the gum where the tooth was extracted. Dr. Monte Meyer was called in and he found a redness of the mucous membrane of the throat. In this case, a small blood transfusion was given by Dr. J. T. Nix. Pentnucleotide and parenteral liver was used. The patient recovered. In neither of the two cases was roentgen ray used.

In reviewing the records of four hospitals in the city for a period of ten years to verify the number of case admitted in those hospitals in that period and the mortality for this disease, Charity Hospital reported ten cases with a mortality of 100 per cent; Touro Infirmary reported seven cases including my case with a mortality of 85 per cent; Ear, Nose and Throat Hospital reported 2 cases with 100 per cent mortality; Hotel Dieu reported one case recovered; one case recovered after first treatment, recurrence took place one year later and he died. Post mortem records at Charity Hospital are of unusual interest; the bone marrow in all cases showed changes from a hyperemic condition to liquefaction. The frightful mortality could have been reduced if an early diagnosis was made and treatment instituted. In my opinion, the best remedies are pentnucleotide and liver extract. I combined the two in each case in order to give the patients a better chance. I cannot say at the present time which has greater merit although personally I am inclined to favor parenteral liver to pentnucleotide. Roentgen ray evidently does not stimulate the bone marrow to a normal degree of neutrophilic regeneration as in all cases at Charity Hospital roentgen ray was used and mortality was 100 per cent. Since we know more about the disease and are using liver extra and pentnucleotide, without roentgen ray, the mortality has been considerably reduced. It all depends however at what stage of the disease the diagnosis is made. If the bone marrow has reached a stage of degeneration and liquefaction, no remedy is of avail.

The American Medical Association Journal, in an editorial about a year ago, quoted an experiment conducted in Egypt with regard to bacterial origin of the disease. Several strains of streptococci and staphylococci were put in a capsule which was planted in the peritoneal cavity of an animal. Shortly afterwards, that animal developed a typical case of agranulocytic angina. The experimenters reasoned that if the bacterial focal infection is large enough and centered in one place, the absorption from that area will produce a change in the bone marrow and give rise to a typical blood picture of agranulocytic angina. The entire subject is still in the experimental stage in regard to the etiology of the disease but no mat-

ter what may be the causative factor, I believe in pentnucleotide and liver extract, particularly the latter, we have definite remedies to bring about a recovery provided an early diagnosis is made. I am therefore inclined to advise that a leukocyte count be made in every case of sore throat, no matter what the nature of the throat lesion might be.

Dr. John T. Crebbin (Shreveport). There are several points to consider. First, is the extreme fatigue. Furthermore, there is great pain upon swallowing and pain along the sterno mastoid muscle upon rotating the head or upon pressure. These symptoms appear before there is any evidence of membrane in the throat or any other constitutional symptoms. Sometimes we find that the membrane appears on the anterior pillar, rather than the throat itself.

It is recognized by most of those who have investigated that this disease frequently follows the taking, for a long time, of some of the benzene-ring drugs, but we must bear in mind also that this may be a primary disease. This fact must not be overlooked.

There are so many of these drugs which may cause agranulocytic angina that we are loath to prescribe them. However, with the present knowledge we have now it is a most difficult decision to know what to prescribe.

Relative to blood transfusions, I question very seriously if this is good procedure. Owing to the fact the infection is overwhelmed in the first place, blood transfusions cause further reaction and this sometimes causes fatality.

Some of the bone marrow preparations and liver extracts have been used with gratifying results. Of course, further use of any drug which is suspected of causing agranulocytic angina must be discontinued immediately, and should never be prescribed again.

Unfortunately, these cases are seen late, and may not be recognized. Accordingly each of the above symptoms should be taken into consideration. The drugs prescribed by the physician and those taken by the patient without a prescription should also be considered. A thorough laboratory examination of throat culture and a complete blood examination before a diagnosis is made, and treatment undertaken.

Dr. H. L. Kearney (New Orleans): I saw my first case of agranulocytic angina April 17, 1927. I think that probably was one of the first, if not the first, observation of the condition in Louisiana. At that time there were about thirty cases of the disease reported in the literature of all countries. This patient was an unmarried female forty-seven years of age, who had had sore throat for four days. She was in a semi-stupor. The right tonsil was black and necrotic; the left tonsil partially

necrotic. The epiglottis, the base of the tongue and the lateral walls of the pharynx were black. A greyish membrane was seen over most of the throat including the arytenoid ring, through which secretions bubbled from the trachea. Culture from the throat was negative for diphtheria, and diphtheria antitoxin which had been administered two days before I saw her had had no effect on the course of the disease. Two diagnostic possibilities were entertained; an attempt at suicide by swallowing an escharotic poison, and agranulocytic angina. The blood picture showing 500 white cells with no neutrophils proved the latter to be correct. Before her death the white cell count dropped to 250.

Among other cases I have seen since that time was a woman seventy-two years old with a total white count of 1050. This patient recovered and was still living and in good health four years after I saw her with the acute condition.

I saw recently this condition in a woman thirty-five years of age with a total white count of 500 with 2 per cent neutrophils. She had, as these patients often do, a superimposed Vincent's infection of the tonsils. She was treated promptly and vigorously with pentnucleotide intramuscularly and recovered.

Pentnucleotide administration in these cases causes a maturation of the granulocyte in from three to five days. In my opinion, it is the best form of therapy we have at the present time. I cannot see the rationale of giving liver extract in agranulocytic angina. One of my patients developed agranulocytic angina while taking liver extract.

Dr. William A. Wagner (New Orleans): I have been sitting by waiting to see if I could contribute something to the discussion, but since every part of the topic has been covered, I cannot add a thing. The discussion has been thorough and the paper complete, but there is one little suggestion I should like to make, and that is the fact that since the etiology is unknown and the disease is so critical and usually fatal and the symptomatology so varied, I think we really ought to mention one fact, and that is with regard to the diagnosis.

I know of no way of diagnosing the condition except by the blood count. The first case I saw was eight years ago, and we treated that patient for Vincent's angina. There were ulcerated lesions in the oral cavity from which the smear showed Vincent's organisms, and consequently we treated the patient for Vincent's. The lesions not

improving, it brought about some discussion of the case, which necessitated a blood count, and through the blood count we made our diagnosis.

I should like to leave this word in closing my discussion, and that is the necessity of making blood pictures on patients with oral lesions suggestive of Vincent's angina. That is the final plea I should like to make to otolaryngologists. With every one of these patients that come to me now with ulcerative lesions of the throat, I immediately make a blood count, because this condition is such a serious one, the mortality rate so high, and the diagnosis almost impossible without the blood count.

Dr. Monte Meyer (New Orleans): I would like to leave a word about the incidence of recurrence in cases of agranulocytic angina. In the last issue of the Archives of Oto-Laryngology, there is a report of a series of these cases, in which the initial attack had cleared up and they were apparently well for a number of years when recurrences occurred, finally ending in death. It behooves us not to be too optimistic in regard to cures of this disease, and consequently these patients should be asked to report from time to time and cytological work continued. In the few cases I have seen, there have been no recurrences as yet, but I am expecting them.

Dr. Phanor L. Perot (Monroe): I want to thank the doctors for their discussion. I do not want to leave the impression that the patients lived. They both died. They were malignant types of agranulocytosis, and practically all of these malignant cases die.

As far as the treatment is concerned, it seems that pentose nucleotide and liver extract are the best bet. However, the treatment is still in the experimental stage.

This disease is very prevalent in middle aged women, physicians, wives, nurses, and hospital employees seem to be the most affected.

These patients take lots of preparations of sedatives, and we should ask ourselves the question, "Why do they take these sedatives?" That might answer some of our questions as to the etiology. I believe if we will have more frequent health examinations we will exclude a lot of these diseases of today that are so difficult to diagnose as to the etiology.

We should always make a blood examination in every condition, regardless of how trivial the complaint is, especially in lesions of the throat. Then we can make a more proper diagnosis.



## PITUITARY INFANTILISM\*

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It has long been appreciated that retardation of somatic growth is in some way associated with failure of the anterior lobe of the pituitary gland to function properly, but the experimental evidence for this association was not definite until recently. Evans<sup>1</sup> has justly stated that the first solidly won achievement in the pituitary field was the production of dwarfism and sexual infantilism in animals after hypophysectomy. He and his associates noted the inability of animals to increase in skeletal dimensions after removal of the pituitary gland. This stasis in growth of long bones was attended by failure to increase in bodily substance as indicated by post-operative weighings. When resumption of growth could be induced by transplants of the pituitary gland or by extracts of the anterior lobe, the relationship of secretion of the anterior lobe of the gland to bodily growth was assured. Later, investigators submitted evidence that this growth-inducing hormone is elaborated by the eosinophilic cells of the anterior lobe.

These growth hormones were soon applied clinically to individuals who were manifestly suffering from retardation of body growth. Cases of human dwarfism have been regarded as representatives of anterior lobe deficiency, although the ultimate cause of this deficiency might be some constitutional disease affecting the gland only as it affected the entire body or some mechanical impairment of function as by neoplasm or, as in the greater number of instances, due to inherent failure of the anterior lobe of the gland to secrete a sufficient amount of its specific substance. Recent evidence has indicated a close relationship between the various forms of dwarfism. Even cretinism has been ascribed by some to the failure of the anterior lobe of the pituitary gland to secrete a sufficient amount of the thyroid-stimulating

substance with secondary thyroid failure and consequent cretinism. The attempts to treat cretinism by administering the thyroid-stimulating substance have not been attended by uniform success.

Cases of human dwarfism which have been designated as Lorraine-Levy type of pituitary infantilism have been treated with pituitary hormones by various investigators. They have reported growth of varying extent after spontaneous growth had apparently ceased. The number of case reports of this type is astonishingly small in view of the marked enthusiasm which has greeted the introduction of potent pituitary hormones into clinical practice. Pituitary infantilism is not a particularly common condition, but neither is it a rarity. This condition may be easily recognized by the generalized underdevelopment of the body, the small, fine features, the symmetrical proportions of the extremities, and the tapering fingers. The typical appearance is that of an adult in miniature. There is no marked deviation from normal in basal metabolic rates, values for plasma cholesterol, or appearance roentgenologically of developing bones.

It is with two of such patients that this report is concerned. Both patients were white girls who were treated in the Medical Clinic of the Touro Infirmary Outpatient Department.

The first patient was admitted August 15, 1933 because she had never menstruated. For an indefinite period of time she had suffered intense frontal headaches and was eventually obliged to withdraw from school because of them. She weighed 80 pounds and was 59 3/4 inches tall. This is distinctly below the normal range of 61-65 inches height and 99-122 pounds weight for girls of 16 years. All the bodily measurements were symmetrically reduced. For a month no attempt at specific therapy was permitted. During this time, she noted a brownish vaginal discharge which lasted a brief period of time and could not be identified definitely as menstruation. The basal metabolic rate was minus 3 per cent. She was then given an extract of the entire anterior lobe of the pituitary gland (Antuitrin), 1 cc. being administered subcutaneously three times a week. The response was gratifying. After two weeks of therapy, she noted diminished incidence and severity of her headaches, and after four weeks of therapy, they had disappeared completely. After two months, there was a menstrual flow

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lasting two days; each month thereafter she menstruated six days. After three months of therapy, during which time she had received 50 injections of Antuitrin, she had grown  $3\frac{1}{4}$  inches and was now  $60\frac{1}{2}$  inches tall. Treatment was then discontinued, and her attendance at the clinic became irregular subsequently. It was noted that she continued to grow after treatment had been ceased; twenty-one months after treatment was instituted (16 months after it had been discontinued) she was  $61\frac{1}{4}$  inches tall and weighed 84 pounds. Her height had therefore been increased  $1\frac{1}{2}$  inches;  $3\frac{3}{4}$  inch has been added during the five months of therapy and  $3\frac{1}{4}$  inch had been added during the following sixteen months. She now menstruates six days each month and has no more headaches; there has been a constant and impressive improvement in her subjective status; she is now much more cheerful and alert than before the institution of therapy.

The second patient was 15 years old when she was first brought to the Touro Infirmary June 17, 1933. Although she should have been 60-64 inches tall according to accepted standards, she was  $58\frac{1}{2}$  inches tall and weighed 75 pounds, the normal weight for her age ranging from 96 to 120 pounds. She had never menstruated and was markedly under developed; this lack of development was evident in the general somatic structures as well as in the secondary sexual characteristics. The breasts were flat, and the general bodily contour was boyish. She had frequent headaches and was constantly lethargic. She did not report to the clinic again for another four months; at this return visit there was no noticeable change in her physical appearance. She reported a vaginal discharge of two days duration which was very scant and had occurred only once during the four months. This constituted the only suggestion of menstruation. She was then given Antuitrin subcutaneously, (1 cubic centimeter being administered two or three times a week). Cooperation was not entirely satisfactory as she did not report regularly for treatments. After she had received a few injections, she was symptomatically much better. The headaches tended to become less severe and soon subsided entirely. Within a month, there was a menstrual period lasting six days. After she had received 21 injections of Antuitrin, she had gained an inch in height, being then  $59\frac{1}{2}$  inches tall. She appeared at the clinic sporadically thereafter and returned four months after treatment had been begun. There was noted marked development of the breasts and the general appearance suggested feminine characteristics; the axillary hair had grown perceptibly. She received no more therapy and reported again to the clinic fourteen months after treatment had been begun (eleven months after treatment had been discontinued), at which time she was  $60\frac{1}{2}$  inches

tall and weighed 80 pounds, thus showing a gain of two inches height and five pounds weight since treatment was initially instituted.

It will be noted that both of these girls experienced many of the events usually encountered by girls during the course of normal establishment of puberty spontaneously. It is believed that at the onset of puberty, there is increased secretion of the anterior lobe of the pituitary gland and that this is responsible for the increased function of the gonads. It is also felt that the increased function of the gonads is responsible for the slowing of the rate of growth at puberty; experimentally, it has been shown that the hormones of the ovaries are antagonistic to those of the pituitary. It is quite possible that these girls did not grow more because there was not sufficient opportunity for them to increase their skeletal dimensions before sexual function was well established. Englebach warned against delay in starting attempts to increase growth because the onset of puberty would end whatever success might be attained previously. It is well to realize that the growth hormone has not been isolated satisfactorily and separated from gonadotropic hormones. There are at present available commercial preparations of the growth hormone, but their worth has yet to be proved. The extract used for these two patients was a relatively crude extract of the whole anterior lobe and may well have contained a sufficient amount of the gonadotropic hormone to cause sexual stimulation and therefore to antagonize the growth-stimulating principles. The part played by the spontaneous onset of puberty in individuals who would naturally mature late in life is difficult to evaluate. It cannot be foretold which subjects will be doomed to dwarfism if untreated and which have a chance of spontaneously regaining their growth impetus; since the clinician has at his disposal potent hormones, it is the part of wisdom to employ them whenever the occasions demand. It is possible that even spontaneously occurring, but delayed, onset of the puberty may be benefitted by hormonal therapy so that the end result will be happier.

#### SUMMARY AND CONCLUSIONS

Two cases of pituitary infantilism are re-

ported. Both were of white females who were retarded physically and sexually and suffered severe headaches. Following the administration of an extract of the anterior lobe of the pituitary gland, both girls increased in skeletal dimensions and in bodily substance. The secondary sex characteristics were accentuated in both. The value of adequate treatment is emphasized, and it is believed that treatment to be successful must be instituted before puberty changes are well established.

#### BIBLIOGRAPHY

1. Evans, H. M.: Clinical manifestations of dysfunction of the anterior pituitary, *J. A. M. A.* 104:464, 1935.
2. Shelton, E. K., Cavanaugh, L. A., and Evans, H. M.: Hypophyseal infantilism, treatment with anterior hypophyseal extract: preliminary study, *Am. J. Dis. Child.* 47:719, 1934.
3. Englebach, W., Schaefer, R. I., and Brosius, W. L.: Endocrine growth deficiencies: diagnosis and treatment, *Endocrinology*, 17:250, 1933.
4. Englebach, W., and Schaefer, R. I.: Endocrine dwarfism; *Endocrinology* 18:387, 1934.
5. Goldberg, M. M.: Pituitary infantilism treated with antuitrin; *Endocrinology* 18:235, 1934.

#### DISCUSSION

Dr. I. I. Lemann: Dr. Jacobs' reports are not only interesting, but stimulating. I hardly think it can be denied, however, that the field of endocrinopathy, particularly pituitary endocrinopathy, still remains a field of surmise. In spite of all the experimental work reported, it cannot be said yet that the results of the experimental work can be applied very successfully clinically, and indeed, as one physiologist told me recently, it can hardly be that the whole field of pituitary dysfunction is so complicated as it has now been made out to be. There must be a simplification.

It has been my lot to see cases of pituitary disturbance based more upon anatomic disease of the pituitary than cases merely of physiologic disturbance. Of course, where there are tumors of the pituitary leading to symptoms such as blindness and headache from erosion of the sella turcica, there cannot be any thought of restoration by administration of pituitary preparations. My experience consists chiefly of those cases where we have had evidence—skiagraphic evidence or autopsy evidence of pituitary tumors.

As far as the relief of dyspituitarism on a purely physiologic basis is concerned, I wish to sound a note of warning in the interpretation of our results, and this warning is based upon personal experience. I am not very large, my wife is small, all her people are small people, and as our boys were approaching the period of puberty they were average size, not particularly large. They had a playmate who was distinctly small. This playmate, it was reported to my wife, was being given some

glands by his doctor, and of course, in her concern for her own boys, she wanted me to give something of the sort to assure their growth. I demurred as I did not know of anything particular to give. One of my boys grew to be 5 feet 11 inches, the other is 5 feet eight. The boy to whom the glands were given has remained a runt. I also remember a neighbor of mine who brought me his boy when he was about fourteen years old. He was very much concerned because the boy was still not developed, has no axillary hair and his genitals were small. He wanted me to give his boy growth hormone of some kind. Again, this boy was not given anything and is now nearly six feet tall; he was a football player at one of the eastern colleges. If we had given any of these boys growth hormone, we would have attributed it to the growth hormone if they had grown to five feet eleven inches. We must be very careful in interpreting results.

I would like to take issue with Dr. Jacobs in his use of the words dwarfism and infantilism and make a special distinction between dwarfism, infantilism and pigmyism. A pigmy is an adult in miniature, a Tom Thumb, perfectly complete with all the secondary and the primary characteristics of an adult. A dwarf is one in whom there is disproportion of the parts of the body, for example the Potts disease dwarf. In infantilism some are of adult size and are as Dr. Jacobs has described, hindered by lack of secondary characteristics. We should not confuse these three: infantilism, dwarfism and pigmyism.

Dr. Sydney Jacobs (In conclusion): I greatly appreciate Dr. Lemann's remarks and agree with him that we must be very conservative in interpreting results. At times, some results do appear to be more spontaneous occurrences than the sequelae of therapy, but despite this fact we should not hesitate to use those potent hormones which are now at our disposal. Of course, we are simply feeling our way; there is nothing final about this. These cases are reported because it is necessary to employ these hormones clinically in order to build up sufficient data to evaluate results. The substance used was not the pure growth hormone, because this was not available at the time that the studies were begun; instead, an extract of the entire anterior lobe of the pituitary was administered.

#### GONOCOCCAL CONJUNCTIVITIS

##### Analysis of 156 Cases\*

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This presentation represents a survey of 156 cases of gonococcal infections of the eyes treated in Charity Hospital during the five year

\*From the Ophthalmological Services of Charity Hospital of Louisiana.



period from July 1927 to July 1932. The study was inspired by the relative frequency of the infection, its serious import, and its economic importance. Gonococcal infections are responsible for ten per cent of all blindness today. We have in the United States about 300,000 blind people for whom millions of dollars are spent annually. Also, there is an impelling desire to pass on to the profession the simple but effective methods of handling these cases.

Of the 156 patients, there were 47 white and 109 colored. The age limits ranged from 24 hours to 69 years. There were 13 patients less than one week, and 64 less than one month of age, thus placing almost half the cases in the category of those resulting from carelessness at birth, or very soon after. There were 102 patients less than 5 years of age, and 2 patients above 60.

There was a marked variation in the time elapsing between onset of infection and the beginning of treatment, ranging from a few hours to thirty days. The average time before treatment was instituted was five and one-half days for the entire group. The average for those having corneal ulcerations was fourteen and a half days, thus showing much greater frequency of corneal ulceration when treatment is delayed.

Corneal ulcerations, the complication which really leads to blindness, were present or developed in 5 out of the 64 under five years of age, or 4.9 per cent. Eighteen developed ulcers out of the total group of 156, giving about 11 per cent. Thus, it is seen that ulcerations of the cornea occur with greater frequency in the older patients.

Bilateral infections were much more frequent in infants and younger children. In this series, there were 96 cases of bilateral, and 60 of unilateral involvement.

Total hospitalization was 1,629 days, an average of 10.4 days for each patient. Counting these hospital days together with a special day and night nurse, which these patients all demand, and other items of expense, it is seen that an expenditure of over \$22,000.00 was necessary in executing proper care for these 156 patients.

The evolution of the treatment for these

cases has been varied, but has now resolved itself into a simple and effective plan which represents the greatest insurance that perfect vision will be preserved and complications avoided.

The patient's diet is to be adequate, balanced, and rich in vitamin content. Free elimination is to be insisted upon.

To still further foster the general defenses and to give local resistance and defensive reaction, foreign proteins are injected. If an immediate reaction is desired, nothing is better than one or two minims of typhoid vaccine given intravenously in saline. A rise in temperature and a chill will usually be noted in less than an hour. At the same time, or soon afterwards, three to fifteen cubic centimeters of boiled sweet milk from which most of the cream has been allowed to separate, is injected intramuscularly to give a delayed but more prolonged reaction. The milk injections are repeated at irregular intervals depending on the febrile state and the clinical course of the infection. Often only one injection is sufficient to give marked improvement. Many other types of proteins have been used, but none has been so readily available, always dependable, or as efficacious as the above. At times, in a debilitated patient unable to stand much reaction, certain protein preparations which do not give rise to a general reaction are useful. One of these, Brooks protein, was used in a number of patients with evident benefit.

In the actual treatment of the eyes themselves nothing is more important than the protection of the uninfected eye. This can be effectively done by cleanliness, securing the hands of infants and young children, and the instillation of 10 per cent argyrol in the normal eye every three or four hours for the first few days. Into the infected eye, 10 per cent argyrol is instilled every fifteen minutes, allowed to remain three minutes, and then the eye is gently irrigated with warm boric acid solution. This frequency is kept up until there is definite evidence of improvement and then the interval increased more and more as recovery advances. Once daily, the lids are everted and one per cent silver nitrate painted on them, and again

irrigation is carried out. The pupil is to be kept dilated with atropine sulphate one-half to one per cent instilled once or twice daily. Cold applications are applied thirty minutes every hour only for five or six hours, and then only in early cases. After that, warm boric acid compresses are kept on constantly. Much damage has been done and many patients rendered blind by too much cold applications which when used to excess or too long, lead to corneal maceration, ulceration, perforation, and blindness. Surgical treatment becomes necessary in many cases of corneal ulceration when perforation is threatening or has occurred with prolapse of the iris. This part of the treatment is to be governed by long established principles and will not be taken up here.

As a last consideration of treatment, there must be mentioned prophylaxis. The method advanced years ago by Crede is not followed as rigidly as it should be. By careful cleansing of the eyes of every infant at birth and the instillation of one or two drops of a one per cent solution of silver nitrate, about one-half of the cases could be prevented. Also, those colleagues who treat genital gonococcal infections should always warn their patients of the dangers of transfer of the infection to the eyes. Finally, let all cases of conjunctivitis be considered serious until proved otherwise, and always stress early diagnosis and immediate treatment as outlined above.

#### SUMMARY

Gonococcal infections of the eyes continue to occur far too frequently, largely as a result of careless or ineffective handling at birth and the failure to warn patients with genital infections.

Incidence of infection is much greater in infants and young children.

Corneal ulcerations occur principally in those cases in which treatment has been delayed or improperly carried out, and especially in those where cold applications have been applied too much.

The greatest insurance against damaged eyes or blindness consists in carrying out the treatment as outlined above, faithfully, gently, and

intelligently. The suggested treatment is the best available at this time.

Too much stress can not be placed on early diagnosis and vigorous treatment. Be suspicious of all cases of conjunctivitis.

A diminution of these infections, and therefore, a decrease in the number of blind public charges, would tend to lighten the ever increasing burden cast upon an already overburdened public.

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### THE TREATMENT OF BRONCHIAL ASTHMA, WITH SPECIAL REFERENCE TO THE INTRAVENOUS ADMINISTRATION OF HYDROCHLORIC ACID\*

UPTON GILES M. D., MANUEL GARDBERG, M. D., and JACKSON B. DISMUKES, M. D.  
NEW ORLEANS

During the past fifteen years the therapeutics of bronchial asthma has undergone radical changes. At the present time all of the various types of bronchial asthma are regarded as expressions of allergic reaction. The realization that asthma is a local manifestation of a constitutional condition and that this state is anaphylactoid in character<sup>1</sup> has enabled us in many instances to employ rational or specific measures instead of subjecting our patients to numerous empirical and often futile procedures of a former period.

The newer method of management involves an attempt to discover the character of materials to which the patient is sensitive or allergic. Then by desensitizing the patient or teaching him to avoid contact with these materials symptomatic relief is obtained in some cases.

#### CLASSIFICATION

We realize the limitations of attempting a classification of asthma either from the clinical or etiological viewpoint.

For diagnostic and therapeutic purposes the following classification is employed:

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\*Read before the Louisiana State Medical Society, New Orleans, April 29-May 1, 1935.

I. Extrinsic:	{	A. Respiratory:	Pollens { Spring Summer Fall Animal epiderm, house dust, toilet preparations, perfumes, flowers, and miscellaneous materials.
		B. Alimentary:	Foods: milk, honey, eggs, fish, meat, fruits, vegetables, nuts, beverages, condiments, drugs and miscellaneous substances such as glue.
		C. Injections:	Therapeutic sera, insects, parasites. (This also may be considered an intrinsic cause).
		D. Contact:?	
II. Intrinsic:	{	A. Respiratory:	Infections such as para-nasal sinuses, bronchitis, etc.
		B. Alimentary:	Intestinal stasis with production and absorption of proteolytic toxins.
		C. Absorption:	Toxic foci—bacterial Protein, etc.
		D. Neurologic:?	

## HISTORY

The first step in the study of the case is the recording of the case history. In the study of the patient with asthma the history may be of greater importance than any other part of the investigation. Careful and complete cross examination of the patient concerning any and all circumstances relative to his attacks will usually yield information of paramount importance in the treatment of the asthma; and with the aid of the physical examination will also indicate whether paroxysmal dyspnea due to cardiac, pulmonary or mediastinal disease is present in addition to bronchial asthma.

As indicated above cases have been classified into: (1) those due to sensitization to intrinsic factors (bacterial asthma) originating in foci of infection or from conditions arising within the body, (2) those due to extrinsic factors originating from without the body. Especially when the attacks are due to extrinsic factors, a careful history is the most important procedure in determining the causative agent. All possible factors pertaining to the case are investigated in detail because occasionally an apparently in-

significant observation leads to the etiological diagnosis.

A patient may have asthma while residing in one house or neighborhood but may be free from all symptoms when his residence is changed; in such instances a careful check of the differences in the environment may lead to discovery of the causative agent. A visit to the patient's home quiet often discloses the causative factor.

The onset, course, frequency and the relation of attacks to occupation, contact with pets and domestic animals, dust, toilet powders, perfumes, smoke, plant, flowers and shrubbery are carefully recorded. The type of pillows, mattresses, bed covers, wall paper, rugs and furniture may have some bearing on the case.

Attacks occurring soon after a meal are often caused by a specific food. Asthma occurring in Spring and Summer is usually caused by pollens or foods common to these seasons, while asthma occurring in winter is usually caused by house dust and infections as well as by certain tree pollens. A patient having an attack after sweeping is probably due to house dust; and those having paroxysms immediately following a dry shampoo or a visit to a beauty parlor are most likely sensitive to orris root, etc.

## PHYSICAL EXAMINATION

While from the standpoint of discovery of the causative factor the physical examination is of secondary importance in asthma of the extrinsic type, however it is of decided importance in cases of intrinsic etiology.

## SPECIAL EXAMINATION

In addition to the routine urinalysis, Wassermann, blood counts, a complete sputum and fecal examinations are done on all patients with asthma. Our opinion is that eosinophilia is of little value in distinguishing the extrinsic from the intrinsic type of the disease.

Röntgenograms of the para-nasal sinuses and of the thorax are part of the routine study. In cases of infected sinus and polypoid degeneration a gross and microscopic examination is made of the aspirations or washings. Gastro-intestinal studies including proctoscopic examination may be indicated in selected cases, paying particular attention to diseases or altered function of the colon.



Tests for hypersensitiveness are carried out on every case. The number and nature of the tests depend upon the information gained from the history and the age of the patient. While these tests may be performed in several ways, we employ: (1) cutaneous method (a) scratch technic or (b) drill technic; and (2) the intracutaneous method where the atopen to be tested is injected as superficially as possible. Other methods of testing such as placing a tiny portion of the dry pollen, or extract of it, into the conjunctival sac or mucous membrane of the nose; and the indirect method of testing atopic hypersensitiveness<sup>2</sup> was not employed in our series of cases.

In asthma of either type the treatment should be based upon the etiological factor whenever this is possible. In the extrinsic type this includes teaching the patient to avoid the materials to which he is sensitive as well as desensitization by injection of gradually increasing doses of the atopen involved. In some cases avoidance alone is the most practical of the two, while in others desensitization is necessary. In the intrinsic type of asthma attempts are made to remove or cure all foci of infection in teeth, tonsils and gastro-intestinal tract. Autogenous and stock vaccines are used in an attempt to desensitize the patient to the bacterial protein to which he is sensitive, though some believe that the effects of these are due to non-specific actions. Operations have proved of little or no benefit to those who are sensitive to proteins. In the non-sensitive cases operations should be performed on the nose and sinuses only from the standpoint of removing the obstruction to the access of air in the nasal cavities and promoting better drainage of the sinuses and with the anticipation of clearing up the infection. Vaccines made from the infected areas at the time of the operation are occasionally required to entirely clear up the infected area.

For the relief of acute attacks epinephrine in  $\frac{1}{2}$  to 1 cc. doses is usually employed. The patient is usually given ephedrine sulphate in  $\frac{3}{4}$  to  $\frac{1}{4}$  grain doses every 3 hours subsequent to the injection of epinephrine. Morphia and atropine sulphate are used when there is a cardiac impairment or a hypertension, especially where the systolic blood pressure is over 200 mm of

mercury. Though we do not hesitate to administer ephedrine to hypertensive subjects we are a bit reluctant to inject epinephrine in these cases unless the hypertension is only moderate or there is little evidence of vascular sclerosis or degeneration<sup>3</sup>. The tendency on our ward is to administer too large a dose of epinephrine (Adrenalin) effecting pallor, tremor, nervousness, sudden rise of blood pressure, palpitation, chilliness, headache and nausea, thereby making unnecessary demands upon the circulatory apparatus. Since our adoption of the minim method or continuous injection of epinephrine developed by Hurst<sup>4</sup>, we have eliminated these reactions. The syringe is filled with the solution and the needle is inserted and allowed to remain in place and an initial injection of two or three minims is given, and then one minim is injected every 30-60 seconds according to the reaction of the patient. The rate of the injection is such as to cause no change in the pulse, and no other effect other than the relief of the asthma.<sup>5</sup> The smallest dose that will give respiratory relief is the largest dose that should be employed<sup>6</sup>. Amytal by mouth is employed in these cases and is also included in the large list of drugs administered to the occasional cases with prolonged severe attacks which are apparently not relieved by epinephrine or the other drugs usually effective in asthma. At time when the attacks are of extreme severity inhalation of ether is employed. In the same type of paroxysm sodium amytal intravenously has proved of greater value. It is at times necessary to administer oxygen and caffeine sodium benzoate during such attacks.

Various drugs are employed as an aid to specific treatment, and are especially useful in non-sensitive cases in which the latter fails.

Iodides, on account of their expectorant qualities, are of particular value in the bacterial type of asthma and when associated with chronic bronchitis and bronchiectasis, the instillation of iodized oil occasionally will work almost like a miracle. The intravenous use of iodides is unnecessary. Sometimes the pollen asthmas are aggravated by the use of iodides. Morphine administered with atropine for the control of an asthmatic paroxysm is often almost a life saver. Atropine, although a component of most asthma

"remedies" is of little value for the control of asthmatic attacks when administered orally. But it is apparently of value as a synergist to morphine when administered to these cases. In some of the milder cases of asthma the solution of pituitary in combination with epinephrine seems to give more prolonged relief and to permit smaller doses of epinephrine.

Calcium has been used empirically for a long time with rather discouraging results. In cases where there is an apparent calcium deficiency the combined administration of calcium and parathyroid can be recommended<sup>8</sup>.

Stramonium is usually one of the components of most asthma mixtures and occasionally when ephedrine is losing its effectiveness and all of our efforts have failed and we are forced to resort to morphine to relieve the paroxysm, the patient, to our embarrassment, will display some patent medicine usually containing stramonium leaves and potassium nitrate or some mixture of iodides, or belladonnae. That will afford a large measure of comfort.

Non-specific protein therapy, vaccines, (auto-genous and stock) tuberculin, peptone, milk are used with good results in some cases. Naturally non-specific treatment does not aid us in determining the cause of the disease. Also we must be careful that the patient is not sensitive to the protein injected. Autohemotherapy and autoserotherapy are undoubtedly forms of non-specific therapy.

Physical therapy measures such as roentgen-ray therapy, actinotherapy, hydrotherapy, diathermy and the artificial induction of fever, either produced by means of a high frequency current of convective heat, all have their advocates, but in our hands have been unreliable or only temporary in their benefits.

Psychic therapy, chemotherapy and air conditioning or mias-free rooms also have their place in selected cases but of course play no part in the treatment of our patients at Charity Hospital.

#### DIET

Since it has been shown that most asthmatic cases show a disordered metabolism (alimentary toxemia) we have made it a rule to prescribe for all allergic cases a diet of low histidin content for three or four days, followed by one in

which histidin is extremely low<sup>10</sup>. Previous to prescribing the histidin poor diet free catharsis is obtained by purgation. In cases where no improvement occurs and where there is a complication of intestinal adhesions, colonic stasis and colitis, colonic therapy is instituted. In all allergic diseases a search should be made for a specific dietary factor. Whenever we find a certain food which the individual is found to be sensitive to, it is eliminated from the diet. However if the food is an important element in the diet or when its use in the preparation of the meal is so varied that avoidance is difficult, hyposensitization is attempted.

It can thus be seen that the management of bronchial asthma requires a careful and prolonged investigation including numerous and elaborate special laboratory examination without which the case cannot be cared for in a scientific manner. However despite the most tireless effort there are many cases in which it has been impossible to discover the etiological agent. In others, those discovered have proved valueless when used in treatment. It is in such cases that so many drugs and non-specific proteins, (tuberculin, milk, peptones, vaccines, etc.) have been employed and though these may give relief to some there still remains quite a large group of cases which are refractory to any and all previously employed forms of treatment. Apparently these cases which fail to respond to autogenous vaccines and repeated surgical attempts to remove foci of infection are an intrinsic type of asthma.

An unusually severe case of this type is here reported together with observation of the effect of a new type of treatment which we recently have been employing.

Mrs. Mary B.—white female had been having almost daily attacks of bronchial asthma for three years when she was admitted to our service on July 11, 1932. She had been under constant medical supervision since February 1927 for chronic pansinusitis, during the treatment for which she had had nine operations as follows: Radical antrum (5, 6, 8, 9) twice on each side; radical frontal (4, 7) on each side; bilateral ethmoidectomy (2); sphenoidectomy and ethmoidectomy (3); submaxillary and middle turbinectomy (1); numerous antrum washings and infra-orbital nerve injection. Five of these operations were performed previous to the first attack of asthma. The bony roof of the right

antrum was necrotic and the right infraorbital nerve was observed to hang from the roof free in the cavity; and the touching of this nerve with an instrument immediately produced an attack of asthma. She has been under treatment in allergy clinics almost constantly since the onset of the asthmatic attacks in June 1929. She had previously been admitted to the hospital (our service) four times because of extremely severe continuous asthmatic attacks which apparently endangered life. During each sojourn in the hospital she was given adrenalin, ephedrine, morphine and atropine. When partially relieved she was again returned to the allergy clinic.

The dates of admissions and discharges are as follows:

Admission	Discharges
4 -7-30	5 -3-30
2-28-31	3-13-31
5 -8-31	5-18-31
4 -4-32	4-24-32

Between admissions she continued to suffer almost daily attacks of asthma.

On July 11, 1932 she was again admitted to the hospital, this time exhibiting almost complete inability to aerate her lungs. During these daily severe attacks she became markedly cyanotic, at times almost comatose, and four times she was pronounced moribund. Adrenalin and ephedrine soon was entirely without effect. Morphine, atropine, iodides (oral and intravenous), afeinil (calcium chloride urea) and amyl nitrite were all tried but found valueless. Autogenous vaccines were prepared but also were without effect. Various non-specific protein therapy likewise gave no relief. She visited the allergy clinic while on the ward but apparently little progress was made. An injection of histamine by the allergist was followed by one of the most severe paroxysms she had ever had. During the most severe attacks it was necessary to administer ether by inhalation.

Sodium amylal intravenously in 3-4 grain doses was found to be more immediately effective and likewise more lasting in the relief which it furnished. Oxygen by nasal catheter was administered whenever the patient became cyanotic or appeared exhausted. We were careful not to allow oxygen too continuously for fear of upsetting her compensatory mechanism. However, at times, it was necessary to continue the administration of oxygen for 2 or 3 days.

It is quite difficult to understand how any patient could exist for eight months in this manner without developing heart failure or dying of pure exhaustion. For eight months she remained a fixture on the ward—a doubtful tribute to therapeutic medicine; each attack of cyanosis serving to refresh our already deepening humility.

At this time it was suggested by one of us that hydrochloric acid might be of some value if ad-

ministered intravenously; several reports having appeared in the literature pointing out the value of this form of treatment.

On December 7, 10 cc. of a 1:1500 solution of hydrochloric acid was injected intravenously. This was repeated on the following day. Whereas she had been having 3 to 4 attacks a day she now had only 3 attacks during the next two days. During the next nine days she had only occasional attacks easily controlled with small doses of adrenalin. Hydrochloric acid was not again administered until December 29. At this time the asthma had returned, at first at longer intervals and then in more rapidly repeated attacks, requiring oxygen, adrenalin, morphine and atropine. On January 1 she had a severe attack and continued in this manner until January 4. On this day she was again given hydrochloric acid. This was followed by four days relief during which interval she was allowed to spend a few hours in the court yard in a rolling chair. On January 9 she had two mild attacks during the day and a severe attack which continued during the entire night and required the administration of sodium amylal. On January 15 after several days of sodium amylal and morphia she was again given hydrochloric acid and remained free of attacks till the 19th when she had two mild attacks relieved with small injections of adrenalin. During the day January 20 she complained of severe precordial pain during an asthmatic attack. Hydrochloric acid was again administered on this day and again on January 23. She remained practically free of attacks until January 26. On January 26 she had an attack which lasted four hours requiring use of ether to obtain relief. No acid was administered from January 23 to February 12. From January 26 to February 11 practically every drug known to be beneficial for asthma was administered in an attempt to obtain relief from the continuous severe attacks which occurred during this time. On February 12, 10 cc. of hydrochloric acid was administered intravenously and during the entire day and night she was free from asthmatic attacks, but during the following day at 11:30 A. M. complained of a slight attack and from then on till February 17 had 2 or 3 attacks daily some of which were quite severe, but most of them were mild in character, however sodium amylal and ephedrine was administered daily. During the morning of the 17th she complained of a severe pain in her chest during a slight asthmatic attack. At 7:30 P. M. she started with a paroxysm that lasted practically all night and relieved with sodium amylal intravenously. However during the early morning the 18th she had a mild attack that gradually became worse and at 12:30 P. M. was pulseless and cyanosed. Sodium amylal, hydrochloric acid, external heat and ether as a general anesthetic was given; and during the afternoon she awoke free from asthma. During the 19th, hydrochloric acid,



sodium amytal, ephedrine was given, and during the afternoon a few inhalations of ether given to abort an attack. On the 20th hydrochloric acid and ether were again administered on account of a paroxysm that had lasted several hours and gradually becoming more severe. On the morning of February 21 she was again given hydrochloric acid intravenously. She had no attacks during the day and late in the afternoon expressed a desire to leave the hospital. She was discharged the following morning but returned for 3 successive days to receive intravenous injections of hydrochloric acid and thereafter has returned from once to twice weekly to receive injections. For a period of two weeks during July 1933 no hydrochloric acid was administered, but during this interim she had an attack lasting several hours which was checked with adrenalin and morphine. Intravenous injections of hydrochloric acid were now resumed and, with only this one exception from February 21, 1933, until the present time she has been free from asthmatic attacks and has received no medication other than intravenous injections of (1:1000 hydrochloric acid.

On March 15, 1935 she was advised to take elixir of pyraminal, which contained amidopyrine, for painful menstruation and an attack of influenza. An attack of asthma immediately occurred which required an injection of adrenalin to relieve. It has previously been determined she was sensitive to all coal tar products. With the attack of influenza and acute exacerbation of the sinus infection daily attacks of asthma re-occured. Intravenous injections of hydrochloric acid (1:1000) were again resumed for five successive days. She has had no asthmatic attacks since the first injection.

Case 2. Dr. J. W. R. Aged 61 years. In active practice. Asthmatic attacks since 1922 following an attack of broncho pneumonia and bilateral maxillary sinusitis. Has had several attacks of sinusitis since then that required washing of antrums. Following antrum washings the asthmatic attacks are less severe in character. Attacks in summer are very mild. Attacks in winter months are severe in character which at times necessitates giving up practice for several days at a time. Examination revealed opaque antrums both to roentgen ray and transillumination. Hyperplastic changes of right sphenoid and right ethmoids. Typical asthmatic rales heard throughout both lung fields. Urine showed 10 plus indican and a positive aldehyde.

Patient was put upon usual eliminative diet effecting some amelioration of asthmatic attacks. Intravenous hydrochloric acid given five successive days and then three times weekly for three weeks. During the winter of 1932 had three attacks of asthma. The following winter had one attack which was followed with six injections of hydrochloric acid. The winter of 1934 one mild attack but took small injection of adrenalin for

relief of attack and followed with ephedrine and amytal for several days.

During the winter of 1932-1933 and 1934, following the administration of hydrochloric acid, had five attacks; previously had as many as four or five some weeks during the winter months.

Case 3. Dr. B. Aged 64 years. In active practice. Has been suffering with asthmatic attacks every summer since 1919 and seem to be more severe each succeeding summer. While these attacks are frequent during the summer months he is quite comfortable during the winter months. Epinephrine relieves the attack for varying lengths of time, however some days may have to take 5-6 injections for relief. Following the epinephrine injection he becomes extremely nervous and complains of headaches, sweating and nausea. Drainage of both antrums gives relief. He has refused any operative interference other than puncture and washings of both maxillary sinuses which have been done many times. Has had 107 cutaneous scratch sensitization tests to determine the specific cause of his asthma.

Examination shows a bilateral maxillary sinusitis, deviated septum and chronic ethmoiditis. Blood pressure is 165-100. Cardiac enlargement. Typical asthmatic rales. Patient is extremely stout and unable to palpate any veins except on back of hand and ankles.

The first part of summer 1932 was very miserable. Intravenous injections of hydrochloric acid (1:1000) given three times weekly. Free of attacks from the first injection till the following summer. Summer of 1933 was most pleasant summer since 1919. Did not lose a single day from practice where previously was unable to leave bed for three or four days at times. During the summer of 1934 discontinued hydrochloric acid injection on account of difficulty in puncturing veins. The mental anxiety and pain made treatment difficult. The latter part of the summer had several attacks.

Case 4. Dr. D. C., Aged 57 years. Referred by Dr. Overbay. Complaints: shortness of breath and irregular asthmatic attacks of several years duration.

Examination revealed a heavy set man, flushed complexion and decidedly overweight. Lungs: Expansion good, but inspiratory and expiratory rales heard. Heart: Enlarged to left. Dullness extends beyond right border of sternum. Blood pressure 130-220. Liver enlarged three finger widths below costal margin. Edema of right ankle. Tonsils cryptic and pus exudes on pressure. Urine showed 10 plus indican, few hyaline casts and slight ring of albumin. P. S. P.: first hour 35, second hour 15. Total 50. Basal metabolism minus 20.

Roentgen ray of skull, 23 and 107 angles reported by Dr. G.; right sided chronic sphenoiditis with hyperplasia. Roentgen ray of chest by Dr.

M.: (2 m. distance), transverse aortic diameter 7 cm., long diameter 18 cm., heart transverse 16 cm. Lungs show moderate fibrosis. Electrocardiogram showed evidence of myocardial changes. He was put on a low protein, low salt diet and medication designed to rest an overloaded liver, and to relieve the kidneys as much as possible. Six weeks later patient was given hydrochloric acid intravenously. After first injection patient has never experienced another attack, but examination at intervals revealed expiratory rales. In September 1934 had slight attack while on Gulf Coast. Six injections of hydrochloric acid again given. During the latter part of February 1935 examination revealed asthmatic rales in both lungs. Three more injections given. No perceptible attack since September 1934. Recent examination revealed no asthmatic rales. Blood pressure 160-90. Urine showed occasional leukocyte and few hyaline casts.

Case 5. T. H. G. Referred by Dr. G. (Dentist). Male child aged 9 years; seen first July 1933. History of asthma since four years of age following acute infection of bilateral maxillary sinusitis and otitis media with ruptured tympanic membrane. The patient is a nephew by marriage of the referring Doctor. The patient has always lived in Detroit, but while visiting an aunt in Colorado had only two mild attacks of asthma. Patient was tested with the group method. The complete test contained thirty-three groups. Each group of the diagnostic protein extract contained from three to six related materials. The extracts used for treating was in the form of paste. There were several tests slightly positive but treatment along this line was unsatisfactory.

Patient was given 17 injections of hydrochloric acid intravenously with marked relief the first week, having two attacks during this interval. Remained here from August to December with only two attacks during this interval. Father was transferred to Buffalo, N. Y. and family moved there. There has been no attacks since moving there. Mother states he apparently is free from any sinus complications, however at times there is a slight discharge from the ear, and is under the care of a laryngologist.

Case 6. E. G. Present age 15 years. Son of dentist; seen for first time in 1930. History of asthma since five years of age. The asthma followed a lobar pneumonia with slow convalescent period. Dr. C. reported "ethmoiditis on right side with pus in same, also sphenoiditis on this side. The antrum is cloudy but not definitely affected yet. The tonsils are also bad." At first the asthma was mild in character but gradually became more severe each year. The patient has been under treatment constantly. Certain drugs such as afenil or patent medicines would seem to give wonderful relief for a while then seem to lose

their beneficial effect. Patient was seen by me in the late winter and early spring months of 1930. Vacation was spent in Denver with no attacks. Returned to Denver with aunt. Has since lived in Denver with visits home each summer. At each visit had paroxysmal attacks of asthma. In July and August 1934 patient received twenty intravenous injections of hydrochloric acid. On remaining home the past winter he had three attacks of coryza but only two paroxysmal attacks of asthma. Examination of the chest revealed characteristic rales on several occasions.

Case 7. R. C. P. White male, aged 24 years. An asthmatic all his life; consulted me in August 1931 presenting the characteristic signs of asthma on examination with marked emphysema of both lungs and a dilated heart with blood pressure of 100-70. Urine showed a 10 plus indicanuria and heavy aldehyde test. Dr. Collier reported a bilateral pansinusitis and advised operation. His tonsils were infected. He was placed on a low protein diet and usual eliminative treatment. As he has had almost every known form of treatment for asthma except calcium he was given afenil intravenously along with nose and throat treatment. This form of therapy lengthened the time between paroxysmal attacks and changed the severity of them, however the patient continued to have asthma. During this time, his tonsils were removed and later ethmoidectomy performed and drainage of both sub-maxillary sinuses. During October 1932 patient had pneumonia followed by acute cardiac failure and was confined to his bed for four months. Following the pneumonia the asthma became more severe in character and attacks nearly every day. He was now resorting to morphia and atropine as adrenalin was losing its value. On September 22, 1934 he despaired of life and took 5 grains of morphia and 1/5 grain of atropine sulphate with suicidal intent. The symptoms were a mixture of atropine and morphine poisoning. He recovered. Following this poisoning he was placed on hydrochloric acid intravenously and immediately there was relief of all symptoms. He states it is the first winter during his entire life he has passed without asthma. Physical examination reveals at times, both inspiratory and expiratory rales.

Case 8. Mr. L. C. D. Aged 55 years. When first seen, January 1934, presented asthma and emphysema which dated back twelve years. For several years he usually had from one to four attacks daily. During December he takes as many as four to seven injections of adrenalin daily. He came with the information that he had infected tonsils, several abscessed teeth and sinus infection. He received injections of intravenous hydrochloric acid for six successive days. During this interval he had four paroxysmal attacks of asthma and took small doses of adrenalin during

these attacks. Examination confirmed his statement regarding the infected tonsils, two molars, one bicuspid and right central abscessed. The right sphenoid and ethmoid sinus infected and deflected septum high up. The teeth were first extracted and mouth put in a hygienic condition as far as dental attention was concerned. His tonsils were next removed and later nose submucous resection performed. During this interim of four months, while taking hydrochloric acid three times weekly, there were several attacks of asthma that required small doses of adrenalin for relief. Following the removal of infection he then was given daily injections of hydrochloric acid and then three times weekly for two months. After the fourth injection he had no other attacks. During January of this year had some foggy days and one night had a slight attack that bothered him for several hours. Six injections at three day intervals were given. No attacks since January.

Case 9. Mrs. G. N. D., aged 34 years. First seen in consultation October 12, 1934. Complaint was recurrent attacks of pyelitis for the past two years, associated with paroxysmal attacks of asthma. Patient had appendectomy 13 years ago. Tonsillectomy later. One year ago had suspension of uterus and one ovary removed and insufflation of tubes with the prospect of becoming pregnant. Menstruation normal till six years ago, since then scanty. History of asthma as child previous to any operative interference. "Apparently out grew it." Examination revealed right chronic hyperplastic sphenoiditis, ethmoiditis, deviated septum and hypertrophic right middle turbinate. Laryngologist believes can clear up condition without any radical operation, however reserves his opinion relative to nasal submucous operation. Urine showed a 10 plus indicanuria. Many pus cells on catheterized specimen. Patient has been under genito urinary specialist for past two years. Roentgen ray of gastro-intestinal tract shows at the junction of the first and second portion of the duodenum there is an acute angle and the second portion appears constricted with evidence of dilation of the third portion. At six hours the stomach is empty and the opaque mixture has transversed to the hepatic flexure. However the six and nine hour observation shows there is ileal stasis and adhesions in the region of the right ovary and a dilation of the ileum behind the adhesion. The twenty-four hour observation shows a redundant flexure with spasticity of the lower colon and sigmoid. The forty-eight hour view is similar to the twenty-four observation except the proximal portion of the meal has progressed from the cecum to the middle portion of the transverse colon. In addition to the genito urinary specialist's treatment, the usual eliminative treatment and diet were given. Colonic therapy and six injections of hydrochloric acid given. After the third

injection of hydrochloric acid she had no other attack of asthma. The sedimentation rate was rapid. During the third week of treatment Brooks protein was given intravenously at three day intervals for one month. The pyelitis soon cleared up and there has been no evidence of pus in the urine since the first month of treatment. January 12 she complained of being nauseated each morning for the past week. Later it was determined she was pregnant. We are unable to determine whether the pregnancy, the hydrochloric acid injections or foreign protein has relieved the asthma.

Case 10. Major B. (Dr. Dismuke's case). Dr. D. reports this case of asthma consulted him in January 1934. Patient has been suffering with asthma for seventeen years. He has had from three to four attacks of asthma daily for years, and at times requires six to seven injections of adrenalin daily to obtain relief. Examination reveals the presence of asthmatic bronchitis with emphysema of both lungs. He also had sinusitis. "Following the removal of all foci of infection he was put on 10 cc. of hydrochloric acid (1:1000) intravenously." Four injections were administered before relief was obtained. Injections then given three times weekly. During the following month he had complete relief even though the weather was unusually damp and foggy. Communication with Dr. Dismuke advises he had had no attacks of asthma, however has taken "two courses of injections" during the early fall and late spring.

Case 11. J. C. B. White male, 61 years of age; seen first August 6, 1934, with a history of asthma for 4 years, and for past eight months has had daily attacks occurring in early evening or late afternoon if slightly foggy or damp. Physical examination showed typical asthmatic rales on repeated examination. Heart slightly enlarged. Examination of nose showed a deflected septum. Blood pressure 140-90. Urinary examination showed four plus Indican. Roentgen ray of sinus showed thickened membranes of both antrums. Hyperplasia of both sphenoids and ethmoids. Deflected septum to the left and hypertrophy of middle turbinates. Specialist advised palliative measures. The electrocardiogram was normal. Gastric analysis showed 20 free hydrochloric acid and total 35 at end of one hour. Treatment: He was put on the usual eliminative treatment (low protein diet) and intravenous injections of hydrochloric acid, three times weekly. The daily attacks of asthma did not occur after the second injection. Acid injections were continued for five weeks. Nasal drops (ephedrine solution etc.) was used three to four times daily.

In February 1935 patient again complained of slight attack occurring in early evening which was relieved with aspirin. Five hydrochloric acid injections were given. Since that time has had no



true attacks, but on occasions felt a tightening sensation of the chest which immediately was relieved with 5 grains of aspirin. Several physical examinations during the day at different intervals revealed no rales.

Case 12. R. W. C. White male, 65 years of age; seen April 6, 1934, with a history of asthma of several years duration. Recently since moving on street opposite Audubon Park has had asthma each night. Recently diagnosed "asthmatic bronchitis" with bronchiectasis: Lipiodol was instilled in lung and patient had asthma continuously for one week. Refused to have another instillation of lipiodol. States he would rather have the asthma. Examination reveals: Chronic ethmoiditis, chronic sphenoiditis. Chest: Heart markedly enlarged, soft systolic murmur heard over mitral and aortic areas. Pulmonic second accentuated. Inspiratory and expiratory rales heard over entire lung fields. Roentgen ray examination shows an enlarged heart with a dilated pulmonary artery. The hilar shadows are exaggerated and thickened. Generalized fibrous changes radiating from the root of both lungs with peri-bronchial infiltration. Calcified nodes about the root of both lungs. Evidence of bronchiectasis and passive congestion of both lungs with peri-bronchial infiltration. Calcified nodes about the root of both lungs. Evidence of bronchiectasis and passive congestion of both lungs. Electrocardiogram shows all complexes of low amplitude. In lead 1 the T wave is less than one-half the height of T wave in lead No. 2 and 3. S. wave accentuated in leads 2 and 3. Slight downward shift of S. T. interval in lead 2 and 3. Ventricular premature contractions. Fractional gastric analysis showed 5 free and 10 total acidity at one hour interval. The second hour was 10 free and 20 total acidity. Patient was confined to bed and administered ephedrine 3/8 gr. and amylal 3/4 gr. two to three times daily. Promptly digitalized. Aspirin was allowed at night for severe attack of asthma. After resuming normal activities patient was given hydrochloric acid intravenously three times weekly. Immediately asthmatic attacks became less intense in character and of shorter duration, but was never entirely relieved of night attacks. While asthmatic powders was discontinued patient was still forced to take aspirin to ameliorate the attack. Later 10 cc. of distilled water was substituted for the acid with as much beneficial results. At the present time the patient is taking emetine injections but related on April 23 his attacks were still severe in character and was forced to take aspirin and inhale asthma power each night.

At the suggestion of Dr. Dismukes, who temporarily was associated with Dr. Gardberg and myself on our Charity Hospital ward, intravenous hydrochloric acid was administered

to Mrs. Mary B. (Case 1). Due to the relief experienced in her case we became interested in this problem.

The cases were divided into two groups of twenty-five each. The eleven cases apparently benefited from this treatment, nine were "picked" cases. By that we mean they had been under competent medical supervision for several years, with more or less relief.

Observing the marked relief experienced in the selected cases and reading the literature<sup>11</sup> relative to intravenous injections of hydrochloric acid we suspected that this was the treatment par excellence for the treatment of asthma. Before the first group was completed we had our doubts and then in the second group of twenty-five cases, where only two were benefited, we realized that in this simple solution we had not found the long sought for panacea.

The following table illustrates the final grouping and disposition of the 50 treated cases of asthma. The seventeen cases diagnosed as bacterial asthma, eleven are apparently relieved. The six remaining cases were only slightly benefited. In the doubtful group where there was evidence of sensitiveness to organic material in combination with foci of infection there was no permanent relief.

In the non-bacterial group there were four cases relieved with eliminative treatment and diet. Three cases showed positive reactions to only one material tested, namely—chocolate, wheat and feathers (chicken, duck and goose). Eighteen cases showed positive cutaneous tests to the materials tested. The number varying from six to twenty-one different materials.

#### FIFTY CASES OF ASTHMA TREATED WITH INTRAVENOUS HYDROCHLORIC ACID

Types	No. Cases	Relieved	Not Relieved	Doubtful Relief
Bacteria	17	11	6	0
Doubtful	12	0	0	12
Non Bacterial	21	0	21	0

Assuming that the many materials that gave positive cutaneous reactions are the causative factors in producing the asthma, one patient being sensitive to wool, feathers, cotton, cottonseed and kapok, it is evident that if the patient

is to obtain relief from the asthma by avoiding the materials to which he is sensitive he may as well join a nudist colony.

Unfortunately, our observation of the material reported does not provide an answer to the important practical question whether intravenous hydrochloric acid should be included in our therapeutic armamentarium for the treatment of bronchial asthma.

The relief from the paroxysmal attacks may as well be a matter of coincident. Experimental procedure is being done relative to the acid-base equilibrium, production of leukocytosis and the opsonic index. This information may allow us to judge whether or not the intravenous hydrochloric acid is responsible for the claimed clinical improvements reported in the literature.

As far as we can determine there has been no harmful affects from the administration of hydrochloric acid in the quantities employed. Burns in his book "Introduction to Bio-Physics," states that "erythrocytes are easily damaged by acid. This will lead to agglutination and hemolysis on the addition of acid as soon as the reserve of base has been used up." However it seems rather presumptuous to assume that the relatively small amount of acid (10 cc. of 1:1000 solution) could cause the destruction of a sufficient number of red blood cells to give cause for alarm. That hemolysis does take place, cannot be denied but that this effect is the result of the acidity of the solution rather than of its hypotonicity seems an unjustifiable conclusion.

The solution administered is extremely hypotonic and its acid content is extremely small. The hemolysis which occurs may well be the result of the hypotonicity of the solution. The amount of acid contained is so small that it apparently cannot affect the alkali reserve of the blood in a harmful manner. Thus on theoretical basis as well as on the grounds of experience after administering over a thousand injections, we feel justified in continuing its use in intractable asthma where other therapeutic measures fail.

#### SUMMARY

1. The method of observation and treatment of asthmatic patients is briefly outlined.

2. Fifty cases are reported which were treated with intravenous hydrochloric acid, and the result is tabulated together with individual account of those cases which fall into the class that are benefited by the treatment.

#### CONCLUSIONS

1. Intravenous hydrochloric acid is apparently of value in the treatment of intractable bacterial asthma—11 out of 17 cases being relieved.

2. The treatment is apparently valueless in the extrinsic type of asthma.

3. Intravenous administration of hydrochloric acid in the quantity and dilution mentioned apparently can be given without any harmful effects.

#### BIBLIOGRAPHY

1. Efron, B. G.: The modern treatment of asthma, *N. O. Med. & Surg. Jour.* 85:1933, 906.
2. Walzer, M., and Krammer, S. D.: Studies in specific hypersensitiveness; indirect method of testing of conditions of atopic hypersensitiveness, *Jour. Immunol.* 10:835, 1925.
3. Feinberg, Samuel M.: Allergy in General Practice, Lea & Febiger.
4. Hurst, Arthur F. *Brit. M. J.*, May 12, 1934.
5. Fantus, Bernard, *Year Book of General Therapeutics*, 1934.
6. Bethea, Oscar W.: *Kansas State Med.* 1934.
7. Bethea, Oscar W.: *Antiasthmatics. International Medical Digest*, July, 1933.
8. Pottenger, F. M.: The physiologic basis for the employment of calcium in the treatment of asthmatic paroxysms, *California State Jour. Med.*, 21:293, 1923.
9. Balyeat, R. M.: Clinical use of epinephrine in allergic diseases with special reference to method of prolonging its effect and importance of its use in cases of asthma complicated with hypertension. *Jour. Lab. & Clinical Med.* 13, 1019-1026, 1928.
10. Eustis, Allan: Further experiences in the dietetic treatment of bronchial asthma. *Sou. Med. Jour.* 9, 1916.
11. Ferguson, Burr, Jr. *Intrav. Therapy* 1:9, 1932; *Clinical Med. & Surg.* 39:1932.
- Smith, N. M., *Clinical Med. & Surg.* 36:388, 1929.
- Salter, W. M.: *Am. Med.* 25:386, 1930
- Beckman, H.: *Treatment in General Practice.*
- Colby, Chas. De Witt.: *So. Med. & Surg.*, 94:264, 1932.

\*The hydrochloric injected is apparently one-tenth of one per cent solution. If the assay stated on the original bottle is 38 per cent, then one cc. of the concentrated C. P. Hydrochloric acid is diluted to 380 cc. with distilled water. The solution is sterilized.

Dr. Allan Eustis, (New Orleans): I want to congratulate Dr. Giles upon his conservatism. Really, to hear a man get up and make as modest claims as he has, with the results he has obtained, (because if you analyze them I feel quite sure that from a numerical or statistical standpoint his results equal those of any other form of treatment,) is gratifying. It is also gratifying to hear him get

up before this Society and recognize asthma not as a disease but as a symptom. The older men of the Society will recall how Dr. George Dock took me to task in 1899 when I suggested the fact that possibly asthma was a symptom of toxemia and not a reflex act. At that time it was considered a reflex act and classed as a disease.

We are going to get somewhere in the treatment of asthma if all men will be as liberal as Dr. Giles. The trouble with us is that the nose and throat men can only see their side, the allergists can only see their side, and the neurologists, who probably see a great many of those hysterical asthmatics, can only see their side. By coordinating all these various factors we will get somewhere in the treatment of symptoms.

I am still greatly interested in the influence of the absorption of histamin and the influence of histidin free diet. It does help but does not cure. For the past thirty years, we have improved upon the diet and have gone beyond that and removed the foci of infection. As to the explanation of hydrochloric acid therapy, it is very difficult. I did not hear Dr. Giles say and maybe he will tell me in closing, whether they have observed the carbon dioxide tension on these cases and whether after the introduction of hydrochloric acid it is lowered.

Personally, I am inclined to think it is hypotonicity. One case got equal results with distilled water. I have been afraid to use hydrochloric acid and have had no experience with this type of treatment.

Dr. Narcisse F. Thiherge, (New Orleans): I agree with Dr. Eustis on the note of conservatism that runs throughout the paper of Dr. Giles. I also wish to concur in what Dr. Eustis said about histamine. The essayists, Dr. Giles and his associates, deserve to be congratulated on the masterly way in which the whole subject of asthma has been covered. There is very little left for me to add except to sound a note of warning against the use of morphine in asthmatic attacks. These cases of intrinsic asthma are highly toxic and opiates intensify their toxemia.

The London Asthma Research Committee strikes a note of warning about being too enthusiastic over any new method of treatment. They remind us of the fact that the allergic patient will respond favorably at first to any new method tried in their condition only to fall further back and then fail to respond to said new method. That is why after nineteen years of work in allergy I have hesitated to use the intravenous injection of hydrochloric acid for asthmatic attacks. There are other reasons too. First, the tendency to alkalosis can be more easily checked by the oral use of acids, by a ketogenic diet, by starvation, or even by artificial or other forms of fever. Another reason that made me hesitate was that the London Asthma Commission found a constant increase of the pH of the

blood before the paroxysm, and reported that in all cases of acute asthma the tendency was towards the acid and away from the alkaline reaction, so diminishing the alkalinity, therefore, may intensify the attack.

I cannot figure out how 1-1000 dilution, 10 cc. of the solution poured into the blood stream, which roughly makes about one to one million acid dilution, can produce any influence as an acid reaction upon the blood stream.

A further reason that made me hesitate was that cases in my service who had been treated with hydrochloric acid responded to non-specifics sometimes better, sometimes worse to hydrochloric acid.

Then also, as brought out in Dr. Giles' paper, which was a very fair representation of the question, is the warning of Schatz in 1926 of the danger of producing anaphylactoid spells due to sensitization in the cases so treated.

All this made me hesitate about using the acid for asthmatic attacks, but I will say I am intensely interested in the subject and have held my conclusions in abeyance because I think there is some virtue in the treatment. Of course, we all have our pet drugs. I am enthusiastic about the use of typho-protein. Many of us fail to grasp the fact that asthma has no constant pathology; in that class of cases where achlorhydria or defect of assimilation is found, the acid method of Brown and Beckman orally is excellent. The pollen positive cases, of course, are always treated with the appropriate extract.

I have been very much interested in the latest findings of the London Research Commission on the suspicious role of acetylcholine so constantly found in the nerve endings of the bronchi of the asthmatic. We have started treatment along this line and hope later to have something to report.

Dr. A. L. Levin, (New Orleans): Dr. Giles is perfectly right in grouping his asthma cases as he did. You can obtain relief in the intrinsic type with hydrochloric acid but not in the extrinsic which is allergically sensitive to pollen or dust.

We have tried it in any number of cases. I do not remember whether I talked to you or your internes—we have two cases in your service, the same as you described, and kept the patients under oxygen and everything else and then tried the injection of hydrochloric acid, starting with 1:1500 and bringing it up. It cannot be applied to every case but we used it on any number of cases in our service and did not have any reaction or shock.

Some work was done along pH and blood determination but I understand from Dr. Eustis some little injury is done. Should see what the pH of the blood is at the time, it must be shifted more to the alkaline side.

Dr. Hans Schroeder, (New Orleans): Bronchial asthma is an angioneurotic edema of the bronchi and originates in the same manner as an angioneurotic edema anywhere. I have discussed the



etiology in my preliminary paper on glaucoma.

It seems very strange that an individual gets along well for 20, 30, or 40 years and then suddenly should develop an idiosyncrasy to certain proteins. A nutritional edema with toxins accumulating in the liver and the gastro-intestinal tract are responsible for this.

Any drug that can be given by mouth should never be given intravenously. For this reason I condemn the treatment under discussion. Dr. Magee told me of a young lady whom he was treating several years ago for angioneurotic edema of the mouth. She complained that when she ate oranges or other fruit her lips, and sometimes the tongue, would swell. She had been on alkalis. He gave her HCl gtt. XV a.c. and she has had no recurrence since.

But why use an inorganic acid when we have organic acids? What would be more natural than to give amino acids? These are contained in your proteins. The results achieved with histamin in the treatment of edema can be obtained also with histidin, which is an amino acid. Supplying the body with meat in the diet all amino acids will be supplied in a proportion required for the body economy.

Dr. Dawson T. Martin, (Donaldsonville, La.) I enjoyed Dr. Giles' paper very much but I want to give my personal experience as I have been a sufferer with hay fever and asthma.

I read an article in the "Laryngoscope" of May, 1934 written by Dr. Warrick of Fort Worth, Texas, on the treatment of hay fever and allergic conditions. This article impressed me so much that I wrote Dr. Warrick and he assured me that he had a cure for hay fever.

I am sure some of you gentlemen recall my discussion of hay fever in Shreveport some four years ago of my having made the statement in the discussion of the paper given before the Society at that time on the vaccine treatment of hay fever. I stated in my discussion that I did not feel that the vaccine treatment had ever been the cause of the complete cure and that I felt that some day someone would find a treatment given to the nasal mucous membrane that would establish a cure for hay fever.

When I read Dr. Warrick's article, I felt that he had discovered where the seat of the trouble was and that he had a cure for a dreaded malady. I took my little girl who was also a sufferer of hay fever to Fort Worth with me in September, 1934 at the time when we were both suffering the worst. I took the treatment one day and assisted Dr. Warrick in the treatment of my little girl the next day. We have both been completely cured of hay fever, and I have treated some twelve cases myself, some of whom suffered terribly with asthma and, until now, these cases all report as being completely cured. After spending a week with Dr. Warrick,

watching him work and listening to his discussions of microscopical and pathological findings of the mucous membrane of the nose before and after treatments, I feel sure that the replacement of normal mucous membrane in the nose following his treatment which covers the irritated naso-palatine ganglion, is what corrects the trouble. I feel that with this treatment, along with pollen vaccine and the intravenous injection of hydrochloric acid, that we have at last been able to accomplish a cure for this condition.

I am sorry that time will not permit me to go further into this discussion and I feel by the time that this year is over, that there will be a great many of us that will want to know more about this treatment. I thank you.

Dr. Upton Giles, (In conclusion): Drs. Gardberg, Dismukes and I wish to thank the doctors for their liberal discussion.

In reference to Dr. Eustis' question I can state that it is only lately that we have started to observe the carbon dioxide tension in addition to the experimental work on the acid base equilibrium, increased leukocytosis and opsonic index in these cases. In several of our cases we are of the opinion that they were benefitted by injections of distilled water, but as the distilled water was not administered to any of the bacterial group, but only to the doubtful group, we hesitate to make mention of these injections at this time. If the experimental work can be continued this phase of the injections will be dealt with fully.

Dr. Thiberge's statement issuing a warning not to be too enthusiastic over any new form of treatment is well taken. It seems that the usual course in the progress of medicine is that when any new therapeutic measure is first discovered that it is hailed as a panacea for many ailments and after a period of overuse and abuse it is relegated to the scrap-heap. There are many vivid illustrations of this statement and this certainly applies to the galvanic current as mentioned by Dr. Marin in his discourse on hay fever. We did not enter into the acid treatment of these cases with any pre-conceived idea, but more or less by accident, having exhausted all of our therapeutic measures in the first case reported. This case was twice brought to the attention of our monthly medical meetings at the hospital requesting assistance.

We are aware of the London Asthmatic Commission's report relative to the hydrogen-ion concentration changes in the blood, but the administration of alkalis was utterly worthless in this case. Having observed this form of therapy indiscriminately used throughout the entire hospital on any or all cases of asthma we are merely attempting to determine if there is a particular group of asthmatics in which acid therapy is beneficial. We have seen only one case where the administration of hydrochloric acid seemed to enhance the severity of

symptoms. This little case was sensitive to chocolate candy and started the attack with evidence of acidosis. We so thoroughly frightened the child with the intravenous medication that we immediately discontinued this form of therapy. Purgation, alkalies and adrenalin promptly relieves the attack. She is free of all symptoms till she again takes chocolate.

The hospital wards of Dr. Levine and myself are directly opposite each other. When a therapeutic agent proves particularly beneficial with some case, the intern across the hall usually employs it on a similar case in our respective wards.

Replying to Dr. Schroeder's previously prepared statement which he has read to us here as follows: "Any drug that can be given by mouth should never be given intravenously. For this reason I condemn the treatment under discussion". We all know from our student days of many years ago that there is an old therapeutic axiom: Never to give any drug intravenously that can be given orally provided you can obtain the same therapeutic action. Glandular extracts such as insulin, can be given by mouth but I know of no one so foolish as to now administer it orally. We can give salt

by mouth too, but if the patient is in need of a saline infusion we certainly would not give salt by mouth thereby producing a dehydrating effect. Naturally with the therapeutic progress of today most of us do not wish to go back to the old horse and surry days and quote axioms of long ago. The question of histamin and histadin has well been taken care of by the original paper and the discussion of it by Dr. Eustis and Dr. Thiberge.

Regarding Dr. Martins experience with hayfever, I might state this is not a discourse on hayfever but on asthma.

As an exponent of physical therapy measures, where properly applied, I am glad to know of his present success with Warwicks ionizing apparatus in the treatment of hayfever. As a follower of this treatment of hayfever for several years, the doctor can be assured he will not continue to have one hundred per cent cures even though a sub-mucous has been done or no obstruction is present and he is fully well able to pack the nasal cavity and his indicator dial on his machine registers a complete packing. However I believe iontophoresis in the treatment of hayfever equals any other recognized form of therapy.

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worked conscientiously and faithfully for many years in the rank of organized medicine. In this instance you will find that the Orleans Parish appreciates the years of devoted service that have been given to the affairs of the organization, having held every elective office except one in the society; each new position has been a promotion because the work that was accomplished with the previous one was so well done, so enthusiastically carried out, so conscientiously performed that Dr. Fenno merited his advancement. There has been no more loyal and no more devoted worker for organized medicine and for the welfare of the physician of the Parish than the new president. His election is not only an appreciation for what he has done but also as a recognition of the ability and the character of the man.

It might be well for all officers in organized medicine to be selected upon the same basis as is Dr. Fenno, and to be chosen for the same reasons. Unfortunately only too often does a man consider his selection to office as an honor which requires personality and dignity to fill but which does not place upon his shoulders responsibility of hard work and of consistent effort. If every officer of organized medicine were to realize that it is not an honor that has been given him but an opportunity for working and for advancing the welfare of the physician and improving the common good of his confreres, then surely organized medicine would be strengthened and would be immeasurably more powerful than it is now.

## HOW MUCH SHOULD THE PATIENT KNOW

In the Dark Ages medicine was surrounded and enveloped by mysticism and mystery. It was the belief of the contemporaneous physicians that the sick man was one in whom spirits had entered; such spirits could only be exorcised by secret charms and occult remedies. Obviously the healers' remedies could have no result so that it was necessary for the practitioner of the occult arts to be secretive concerning the methods that he employed. Gradually a change was evolved in the practice of medicine; anatomy was taught, the elements of path-

## THE NEW PRESIDENT OF THE ORLEANS PARISH MEDICAL SOCIETY

For obvious reasons the journal has not been in the habit of commenting upon the selection of officers of the parish societies, district societies or other local organizations. An exception is to be taken at the present time in noting the selection of Dr. Frederick L. Fenno, as President of the Orleans Parish Medical Society. The reason for this alteration in our usual policy is that in this instance there has been awarded an honor to a man who has



ology were appreciated and even physiology, at the time of Harvey, began to be a not altogether unknown science. It took many centuries, however, for modern medicine to come into being. Even in the days of fifty years ago there was still practiced by the physicians a certain amount of mysticism and always did they keep quiet about the disease from which the patient suffered. The doctor's knowledge was limited and possibly it may have been that ignorance was concealed under the guise of reticence. With the increasing knowledge of physical ills that has evolved with scientific study of disease in the last few decades, medicine is rapidly approaching an exact science. Certainly there is far less guess work and far more fact in diagnosis today than twenty-five years ago, or even ten years ago.

The practitioner of our childhood with his long frock coat, his formal manners and his Latin prescriptions has gone. The modern practitioner of medicine is no different in appearance and in actions than is the business man or professional man of other types. With these changes in knowledge and in personality there has come about an increased realization that the cooperation of the patient is essential in the proper management of the chronic diseases. The more that the patient knows about himself and his disorder the more intelligent will be his care of himself. This first was taught by men interested in tuberculosis. They realized and appreciated that a definite knowledge of the transmission of the disease, of what might happen to the patient, of the rationale of the treatment, was an invaluable adjunct to successful therapy. In the management of the diabetic patient nowadays the physician will recommend to the patient one or another of the half a dozen or more manuals that are prepared for the lay reader. In other of the chronic diseases exactly the same transformation is taking place. The cardiac patient is more satisfactorily managed if he has full information about his condition. Manuals are appearing now for the patient who has heart disease and the same may be said about other chronic conditions; notable is the frank presentation of facts in books and by physicians for him who is physically disturbed. It cannot be gainsaid that

broad, comprehensive and intelligent information about the disease from which he is suffering is invaluable for the proper cooperative handling of the chronic disease by the patient himself and by his physician.

When it comes to the acute illnesses here again the man who has a reasonable degree of intelligence can be satisfied mentally if the doctor will give to that patient a brief expression of the salient features of the disease. If the prognosis is bad it may be mitigated by a statement not too dogmatic, or hedged by certain qualifications. It is only the exceptional self-centered, worrying person who will get along more satisfactory if he knows nothing about his condition.

In determining how much the patient should know in regard to his acute sickness a knowledge of the personality of the patient is invaluable. In this lies one of the advantages that the general practitioner has over the specialist. He knows and understands the psychic makeup of the individual who has been his patient for years. To him should go the decision as to how much and what should be told to the patient about his sickness. On him should rest the responsibility and the decision as to whether the individual sick person would be helped or made worse were he told what was his diagnosis, what was the prognosis, and what untoward events might alter the outcome of the condition. To the majority of patients a sane, sensible and simplified statement of these facts will give much comfort.

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#### PHENOBARBITAL POISONING

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There is a constant growing employment of the drugs of the barbituric group. With this increase in the use of these drugs in both medical and surgical conditions there has been a tendency to forget that they may have toxic effects and that there are limitations to their administration. Scarlett and Macnab\*, noting this inclination to prescribe promiscuously

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\*Scarlett, E. P., and Macnab, D. S.: Poisoning from Phenobarbital (Luminal) (With Report of a Fatal Case and Review of Fatalities Previously Reported). Canadian Med. Assn. Jour., 22:635, 1935.

various barbiturates have reviewed the use of the barbituric acid derivatives which were first introduced, incidentally, into medicine in 1903. The first of these was barbital (veronal), then came phenobarbital (luminal) ten years later. Subsequently many hypnotics of the same series have been developed, many which are such well known preparations as dial, amytal, neonal, nembutal, allonal and evapan. For certain chemical reasons which are not necessary to relate there is considerable difference in the toxicity of these different preparations. Amytal and nembutal are ten times as toxic as is veronal.

Toxic symptoms may develop because of idiosyncrasy to the drug, because of long continued use, because of organic disease of the liver, or through overdosage. There are three main groups of symptoms as a result of such intoxication. First, those that have to do with the central nervous system which include vertigo, ataxia, indistinct speech, ocular disturbances and headache. Second, cutaneous eruptions usually of an erythematous character, and third, the general symptoms, most important of which are vasomotor collapse, respiratory irregularities, albuminuria, suppression of urine and epigastric distress. Idiosyncrasy to the drug and long continued use are responsible for the skin eruptions. It has been said that to the barbiturates in general 3 per cent of people will be intolerant of the preparation. Skin rashes are said by the French to occur in as high as 20 per cent of those using veronal

and 5 per cent using phenobarbital. Usually the dermatoses are mild erythemas and show little constitutional reaction. Occasionally an urticaria develops and once in a while an extreme dermatitis comparable to that due to arsenic.

Acute phenobarbital poisoning has produced 44 fatal deaths reported in the literature. The acute toxic manifestations are not only local, but also associated at times with severe constitutional reactions as could be gleaned from the fact that, as mentioned above, so many fatalities have occurred. In the case report by these two authors which came to autopsy the skin showed thickening, edema and many bullae notably over the chest, arms and back. The kidneys and liver showed cloudy swelling microscopically. The patient also had an acute encephalitis hemorrhagica which was improving when the intense phenobarbital poisoning occurred.

The important thing to remember when giving barbiturates is that there is a steadily increasing number of cases reported in which there seems to be a sensitivity to the drug. Indiscriminate use of these preparations is contraindicated, more particularly in senility and in debilitated patients, in those who have severe genito-urinary disease or defective liver function, as well as the hypertensive arteriosclerotic upon whose blood pressure there is often marked effect. Pulmonary disease and severe toxemia from sepsis add to the danger of the administration of these preparations.

## HOSPITAL STAFF TRANSACTIONS AND CLINICAL MEETINGS

### TOURO INFIRMARY

The annual meeting of the Medical Staff of Touro Infirmary was held Wednesday, January 8, 1936, at 8:00 p. m., Dr. Henry Blum, Chairman, presiding.

As the first order of business Dr. John A. Lanford conducted a clinico-pathological conference on two cases, from 8 to 9:00 p. m. These cases were discussed freely by Drs. Lemann, Tyrone and Matas.

The method of continuous drip blood transfusion used in the treatment of a case of duodenal ulcer hemorrhage was described and discussed by Dr. Daniel Silverman and Dr. Rudolph Matas. Drs.

Heninger and Eustis further discussed the case presented.

Dr. Julian Graubarth briefly and adequately presented an interesting aspect of a case of scurvy, presenting the roentgenograms before and after treatment. Dr. Graubarth's presentation was discussed by Drs. Rodick, Sydney Jacobs, and DeBuys.

There then followed a review of the activities of the Staff during the year which was read by the Secretary, Dr. Walter Levy.

The annual election of two representatives of the Staff at large to the Executive Committee resulted in Dr. Hilliard Miller and Dr. Urban Maes being named as the representatives.

Willard R. Wirth, M. D.

## HOTEL DIEU

The regular monthly meeting of the Staff of Hotel Dieu was held on Monday, December 16, 1935 at 8:00 p. m. in the Nurses' Lecture Room of Hotel Dieu.

The meeting was called to order by the President, Dr. Val Fuchs, and with the acting Secretary, Dr. Frank Chetta, at the desk.

The Scientific Program Included:

a. "Melanoma of the Eyeball" by Dr. J. B. Larose. Discussion by Drs. Perret and Meyer.

b. "Multiple Malignancies of the Colon" by Dr. E. Souchon. Discussion by Drs. Silverman, Willoughby, and Levy.

c. "Malignancy Slide Demonstration" by Drs. Nix and Garcia.

Executive session then followed and the meeting was adjourned.

## CHARITY HOSPITAL

The regular monthly meeting of the medical staff of Charity Hospital was held January 21, 1936, Dr. Willard R. Wirth, Chairman, presiding.

Dr. A. L. Levin presented a case of oesophageal stricture. By special invitation, Dr. Urban Maes was present to discuss the surgical aspects of this condition.

Two cases of syphilis of the peripheral nerve were presented by Dr. Erwin Wexberg. One was a case of polyneuritis. The other a case of peroneal neuritis with tabes dorsalis. This presentation was discussed by Dr. L. L. Cazenavette.

The clinical record and autopsy findings in a case of sickle-cell anemia in a negro girl 14 years of age were presented by Dr. M. L. Shushan. Dr. M. A. Ogden discussed the pathology of the case.

Election of officers for the new year followed, resulting in the election of Dr. R. H. Kampmeier, Chairman, Dr. M. W. Miller, Vice-Chairman and Dr. Manuel Gardberg, Secretary.

Willard R. Wirth.

## FRENCH HOSPITAL

A regular meeting of the French Hospital Staff was called to order with Dr. Ader presiding. Dr. R. H. McCarty read the minutes, in the absence of Dr. Tessitore.

The death of Mrs. A. was then discussed. In the absence of the attending physician, Dr. Rougelot pointed out that this was a case discussed at the previous meeting, before the death, at which time there was some doubt as to the location of the tumor. The fact that the patient could not retain a barium enema made the exact diagnosis of the lesion impossible. However, the presence of blood in the stools and the location of the tumor seemed to indicate the diagnosis of carcinoma of the transverse colon.

The motion was made and passed that the application of Dr. C. C. Mary be submitted to the proper committee for approval.

Dr. A. V. Friedrichs then presented a very interesting demonstration, which consisted of lantern slide reviews of pathological specimens received in his laboratory. Among which were the following: Lesions of the heart valve in subacute bacterial endocarditis; syphilitic and arterio-sclerotic lesions of the aorta; infarcts of the kidney, spleen, and lungs; gummata of the liver in the new born; sclerosis and metastatic carcinoma of the liver and syphilis of the skull and long bones.

Dr. Menville stated that to him pathology is the cornerstone of medicine and that more extensive examination of the tissues should be made to find the classes, species, etc., that can only be classified by the pathologist.

The election of officers for the year 1936 was then opened. The incoming officers are as follows: Dr. W. R. Strange, Chairman; Dr. J. Palermo, Vice Chairman; Dr. R. H. McCarty, Secretary.

Dr. Ader then expressed his sincere thanks to all who attended and took part in the meetings during his time as Chairman for the past year.

The meeting was then turned over to the new Chairman, who appointed the following committees: Membership committee: Dr. M. J. Lyons, Chairman; Dr. W. H. Harris, Dr. M. Lesclae. Program committee: Dr. E. L. Zander, chairman; Dr. A. V. Friedrichs, Dr. R. L. Gordon. Record Committee; Dr. R. E. Rougelot, Chairman; Dr. D. J. Geraci, Dr. M. L. Stadiem.

N. J. Tessitore, M. D.

J. T. NIX CLINIC  
NEW ORLEANS

At a meeting held in January, Doctor C. E. Gorman read the following paper:

## A REVIEW OF 595 PHYSICAL EXAMINATIONS

In reviewing the charts of five hundred and ninety-five physical examinations of children of school age, several findings seemed to warrant discussion. These cases were seen in the Fall of 1935 from September to December. Foremost of these pathological conditions were the teeth. The next two were rickets and tonsils. The eyes were fairly normal except in the occasional case. The heart and lungs ranked among the highest percentage as normal.

In the past years the pediatrician saw many atrocious sights primarily due to rickets. Thomas Fuller, 1608-1661, a celebrated English chaplain, gave a classical description for rickets. "There is a disease of infants called the rickets, wherein the head waxeth too great, while the legs and lower parts wane too little." The actual term rickets was originally derived from the old English word, "wrickken" to twist.

The essayist was impressed by the large num-



ber of children presenting symptoms of rickets. It should be thoroughly understood that these cases of rickets were not purposely recorded. They were observed in routine examinations where the child presented no "present illness." A child was not recorded as being rachitic unless he presented definite signs and symptoms of bone pathology. Slight or suggestive signs or symptoms were discounted. The majority of the cases finally termed rachitic presented not one but a combination of signs and symptoms. Many presented the "rachitic rosary", "Harrison's groove", and "pigeon breast."

In examining eyes the ordinary Snelling test chart was used at twenty feet. No cycloplegics were employed but each eye was tested individually. It is undeniable that backwardness in school work can be attributed to a large extent to poor vision. There were several children who had never worn glasses nor had had their eyes examined previously. It seemed utterly preposterous; they could not read 20/200 on the Snelling Chart. The illiterate chart was used as a check and these cases averaged between 10/200 and 15/200. We can only leave it to your imagination how well he was able to prepare his lesson.

There were forty-one patients in this group who presented definite eye pathology or who were wearing glasses. Twelve of these were not and had never worn glasses. Several were in dire need of properly fitted glasses and the remainder certainly could have been benefitted. Among the miscellaneous eye conditions charted were anterior synechia, trachoma, hordeolum and internal strabismus. Therefore the total percentage is 6.8 eye cases seen in examining 595 patients.

It was quite pleasing to be able to note that more tonsils were removed than there were diseased ones present. This indicates a very active group of ear, nose and throat specialists. In addition, it reflects the value of public education in certain matters concerning health. There were 247 cases, 41.5 per cent in which the tonsils had been removed. Of 206 patients, 34.6 per cent were suffering from diseased tonsils in one form or another. Therefore, 76 per cent, or a total of 453, were, or had been, suffering from tonsillar disease. The 206 cases presented all types and varieties of tonsillar disease and their combinations. Cryptic, pus bearing, and hypertrophic were most frequently met.

The examination of the teeth was extremely enlightening from a viewpoint of dental pathology. These conditions were recorded under four types: Caries, good repair, discolored, and poor alignment. There were 348 presenting carious teeth, or a percentage of 58.4. The greatest number of these was in extremely bad condition and several of the older group had lost some of their permanent teeth. Thirty-seven presented marked discoloration, 20 were in extremely poor alignment, 95

showed extensive repair work. We have, therefore, a total of 500 presenting definite tooth pathology. This is 84 per cent of the total 595 examinations. The information gathered in the dental study is in perfect harmony with the other section of the examination, particularly the rachitic group. Children presenting teeth in such a condition of decay certainly are living evidence of a great dietary discrepancy. They could not have enjoyed the good fortune of a properly regulated calcium and vitamin ingestion and metabolism. Evidently parents do not recognize the benefits of a healthy set of teeth. It is a pitiful sight to see a boy or girl around 14 years of age with permanent teeth that are decayed, and even more so to see one who has had several extracted.

Next in order of frequency of occurrence we find 211 definite cases of rickets. In labelling these cases rickets we feel that we were lenient in more cases than we were critical. We did not consider a case rachitic until we had proven it beyond question. For example, we only considered such things as Harrison's groove, rachitic rosary, or pigeon breast. These are physical defects which are unmistakably rachitic in origin and are only seen in the late stages of the condition. Nearly all of these cases presented a picture of being under par physically.

Next, again in the order of frequency, we must consider the skin conditions encountered. These of course were extremely varied. The predominant finding was scabies. There were early cases, violent cases, infected cases, and cases with a superimposed impetigo. There was a noticeable number of hypertrichosis; eight were encountered; also two cases of acne malignum, and four cases of furunculosis. There were many other varied skin conditions which totaled fifty-one or 8.5 per cent.

The posture of a very large percentage could have been improved greatly. Thirty-five, or 5.8 per cent, presented very poor posture. This group was in definite need of medical advice regarding the correction of this fault.

Under miscellaneous were classified such conditions as hyperthyroidism or adiposity. This class constituted a small number in this group of cases. There were six, or 1 per cent of such cases.

There were several cases which presented definite cardiac and intrathoracic pathology. These are in contrast to the large number presenting functional conditions. There were eight, 1.3 per cent with cardiac complications, and seven, or 1 per cent with lung complications.

These figures with their large number of bad teeth and tonsils indicate a lack of public education. They are a conjoint indictment against both the family and the physician. With the present day knowledge there is absolutely no excuse for any individual to have rickets. It is agreed among pediatricians that rickets develops between the

ages of three and eighteen months. The diet during this stage has a specific bearing also on the condition of the teeth in later life. During this very vital period of life the average child has a "granny" to fix and adjust the formula like she did for her own children. Better than this, and what a large percentage are accustomed to, are the formulas which are arranged by the general practitioner or obstetrician. Even the latter two are not ideal. The writer is of the opinion that the ideal situation is to have a pediatrician adjust the formulas for the babies. In this manner a great step forward would be taken in promoting the general welfare of children.

#### COMMENT

The statistics resulting from this series of examinations show:

1. That despite the advancement in anti-rachitic therapy there are yet entirely too many deformities due directly to rickets. Of 595 children 211, or 35.47 per cent showed definite signs of rickets.
2. That the teeth of the growing child could be improved by a more scientific and better arranged diet.
3. That the ideal situation is to have a pediatrician adjust the diets of children.
4. That 500, or 84 per cent presented defective teeth.
5. That a great number of this group showing defective teeth and rickets had been subjected to gross discrepancies in diet between the ages of three and eighteen months. A large number of the dental group and the rachitic group could have been spared their deformity by a proper regime of diet resulting in normal metabolism.

OSCAR ALLEN TUMOR CLINIC  
CHARITY HOSPITAL  
NEW ORLEANS

The scientific meeting of January was called by Doctor James T. Nix, Director. The essayist was Dr. Manuel García, who presented the following paper:

#### THE TREATMENT OF KELOIDS

The therapy of keloids is still in a very unsatisfactory state. Often remedial measures merely aggravate the condition. Simple excision is almost uniformly followed by recurrence and radiation alone seldom suffices to eradicate the growth. Plastic repair is sometimes needed to take care of a large skin defect left after the removal of a keloid and its reappearance is then nearly inescapable. With the intention of defining the more favorable factors in the therapeutic attack on keloid we have consulted some of the recent literature and reviewed eleven cases who

reported at the Tumor Clinic during the first year of operation, 1933-1934.

Keloid, according to Ewing, is a peculiar overgrowth of hyaline connective tissue developing in the skin of predisposed subjects after trauma or scarring. The racial propensity of the negro is well known, and a familial tendency has also been observed. The traumatic factor is so constant that Ewing infers that in so-called spontaneous or true keloids it has not been carefully traced.

The neoplastic properties in keloid are not pronounced and Stout holds the view that it is not strictly a new growth. But though at its inception it is a fibrous overgrowth dependent on chronic nutritive disturbance for its progress, yet it sometimes possesses considerable momentum for expansion, with nuclear hypertrophy and the attainment of a massive size in a few months. In any event, the tendency to extend beyond the confines of the traumatic scar and to recur after extirpation certainly are clinical neoplastic features.

Keloid occurs in the form of an irregularly raised, wide, firm thickening of scar tissue, which gradually extends over a considerable area, or as more circumscribed nodular or polypoid masses, traversed by fine vessels and tending to invade the neighboring skin with claw-like (Greek, *xeloid*) cords and bands. The skin over the tumor is pink, thin, smooth and glistening due to atrophy of the dermal papillae. Microscopically, keloid consists of anastomosing strands of thick, hyaline, collagenous matrix between which lie many well-nourished fibroblasts. Small well-developed blood vessels are present. Elastic fibers are missing, according to Ewing; but this is a controversial point, Gans claiming that they are present and that they serve to differentiate keloid from fibroma. The periphery of the tumor is not well defined but may be more cellular, with thinner fibers than the central portions.

The only symptoms present are itching or pain but both are inconstant. Usually the only indication for therapeutic interference is the correction of disfigurement produced by the growth.

Attempt at cure of keloids must vary with the individual features of a given case. It is well established that surgery and radiation must be combined to obtain the best results. We have had no experience with the carbon dioxide freezing method, nor with strong escharotics, but from the literature one gathers that they are inferior to those first mentioned.

According to Hodges, the most important factor in the treatment of keloid is the institution of proper irradiation in the early stages of the disease, while the cells composing the growth are very radiosensitive, when the differential effect of radiation on the young cells is at its maximal period. In a survey of the techniques used by different radiologists, Hodges found that Pfahler

employed pre and post-operative radiation; that Grier and Bowen believed that unfiltered roentgen rays were superior, while Pancoast, Kilbane, Gerber and others preferred filtered rays, as leading to a smaller percentage of sequels. Kilbane and Grier are said to use 80-90 per cent erythema doses at intervals of six to eight weeks. With the same dosage, Sherman employs a one millimeter aluminum filter.

Although Kilbane believes that all keloids can be destroyed by roentgen ray if treated sufficiently and properly, very thick old keloids should be removed surgically and given post-operative radiation. In the opinion of Hodges, radium and roentgen rays are equally efficacious in the treatment of this condition but the large area of the body surface usually involved makes the roentgen ray the method of choice in the majority of cases. He has obtained excellent results with 250-300 r units of unfiltered rays at 80-90 KV every four to six weeks. In the avoidance of telangiectasia and wrinkling of the skin, which may follow radiation, accurate dosage and proper spacing of the treatments are essential.

Passot, of Paris, who has devoted much attention to this matter, emphasizes that successful treatment depends on immediate irradiation after surgical removal. In 1922 he recommended the use of radium about a week after operation, but he is now advising immediate post-operative administration.

According to Passot, in the removal of a keloid one must keep in mind that the subcutaneous involvement is usually much greater than at the surface. Great care must be taken, therefore, to remove every article lying deeply in order to prevent a recurrence. If the defect left is too large for simple suture, he advises that a graft of fat be taken from the thigh and implanted in the depression. The irregular margins of the keloid scar should be cut to a simple elliptical pattern. When possible the natural folds of the skin are to be followed. Two types of sutures are recommended, the dermo-epidermic and the intradermic. The former is an interrupted suture in which each stitch is placed obliquely from within outward and the needle takes in a greater thickness of cutaneous and subcutaneous tissue below than at the surface. The intradermic suture is an over-casting stitch with free ends at either extremity of the wound. This can be used only in locations where the skin has great resistance. The dressing of the wound is of great importance. To prevent tension on the sutures two methods are suggested. In one the assistant places his fingers on either side of the wound forming a fold by pressure, a layer of cellophane is applied over the fold, and the borders are sealed with collodion. Traction then affects the cellophane and not the sutures. In the other method, adhesive tape is placed across the

incision, cut in the middle and sutured, thus relieving the tension on the wound itself. Passot is convinced that radium is most effective when applied at the time of operation. According to the size of the incision he uses one or several tubes of radium, each containing 10 mg. of the element with a filtration of 1.5 mm. of platinum, and used at a distance of one cm. from the skin. When only one tube is used it is left in place for twenty-four hours. When several are employed they are applied for from fifteen to twenty hours. Passot has obtained good results from large doses of roentgen irradiation given at one sitting shortly after operation and believes this method preferable to the use of small doses. However, he considers radium superior to roentgen irradiation.

At the Tumor Clinic the cases seen two years ago received no uniform plan of treatment, as we wished to arrive at the optimal requirements after trying several technics. The cases under observation since the first year of operation of the Tumor Clinic were as follows:

1. G. V., colored female, 25 years old, had keloids in the lobes of both ears, each less than 2 cm in diameter, and a thick linear one, about 12 cm in length on the left side of the neck. November 16, 1933 she received 75 mghrs. of radium interstitially in the left ear, but this produced little effect so the keloid was excised February 9, 1934, and 380 r units of unfiltered roentgen rays were given the same day. On March 8, 1934 the keloid on the right ear was treated in the same way. From April, 1934 to March 1935 she received four radium applications to the neck, one of 75, two of 50 and the last of 200 mghrs. of interstitial radiation. These produced a marked reduction in the size of the keloid. In November, 1934, the patient was accidentally cut in the neck and 1360 r units of prophylactic unfiltered roentgen rays were given. No keloids present now.

2. M. V., colored female, 21 years old, admitted November 19, 1933 with firm keloids in both ear lobes, each more than one cm in diameter. The left received 200 mghrs. of combined interstitial and surface radiation the same day. No satisfactory regression was produced so January 11, 1934 the left keloid was excised and 680 r units of unfiltered roentgen rays given immediately. The same treatment was used on the opposite side and neither has recurred.

3. N. B., colored male, 38, with keloid 8x3 cm in size, on the back of the neck. He received radium seven times, using from 100 to 160 mghrs. each time at intervals of one to four months. The keloid disappeared without excision.

4. A. J., colored female, 3 years old, seen December 12, 1933 with a keloid 5 cm long on right side of neck. Because child developed measles, followed by bronchitis, she was not treated until March, 1934, when she received 30 mghrs. in-



terstitially. This caused no improvement and she was referred to the ward for excision; but she had gonorrheal vaginitis and could not be admitted. In November, 1934, she was given 30 mghrs. again but practically no regression took place. In December she was removed from the city and has not been seen again.

5. R. E. J., colored female, 27 years old, seen May 22, 1934, with keloid of the crest of the right ear measuring 2x4 cm. This was excised the same day and 75 mghrs were given to the incision. In June 1934 the lesion was well, but the scar of an abdominal operation began to enlarge and to become painful. On April 23, 1935, 500 mghrs were applied to the abdominal scar. It sloughed off and there has been no recurrence.

6. B. M., colored female, 48 years old, seen with keloid of anterior chest wall. On August 30, 1934, it was carefully excised, but due to an error the patient did not receive the customary radiation, but was given eight weekly doses instead, each 90 roof roentgen ray at 170 KV, with 1/2 mm of copper filtration. The scar enlarged and in six months was greater than the original keloid. The patient has refused any more treatment.

7. A. M. C., white female, 11 years old, developed keloidal thickening in the scar of operation on the right side for the removal of a tumor. She was treated August 20, 1934, with 680 r of unfiltered radiation. No further activity in eighteen months.

8. F. V., white male, 19 years old, seen June 14, 1934, with two small keloids over the sternum. Treated with 160 mghrs. of interstitial radiation. Complete regression.

9. G. K., white male, 10 years old, with keloid, 3 cm in diameter on anterior chest wall. Treated by 40 mghrs interstitially. Growth regressed but did not disappear. Mother does not permit operation.

10. O. T., colored male, 26 years old, with keloidal scar on left shoulder. Treated in February, 1934, by excision and immediate radiation with 340 r units of unfiltered roentgen ray. No recurrence.

11. W. W., colored male, 28 years old, admitted May 17, 1934, with keloid of right forearm, about 1 cm in diameter. This was excised for biopsy because patient had some lesions of forehead. No other treatment given. The patient has not been seen at the Clinic since August, 1934, when he was referred to dermatology because lesions in forehead were suspicious for leprosy.

Nearly all these cases indicate, either positively or negatively, that the greatest success is attained when the keloid is removed surgically and the incision is radiated immediately with one or two erythema doses of unfiltered radiation; a superficial application of radium with a dosage of 75 to

200 mghrs. per centimeter of incision, also seems to be effective. Interstitial radiation alone must be given in doses sufficient to produce sloughing of the keloidal mass.

#### CONCLUSIONS

Keloids are fibrous overgrowths of the skin best treated by careful surgical excision immediately followed by radiation of the wound. The trauma of operation must be minimal, and tension or irritation of the edges of the incision must be avoided. The simplest method of irradiation consists in the administration of one or two erythema doses (340 to 680 r units) of unfiltered roentgen rays at 90 KV; the larger dose is given when the area to be treated is relatively small. Eleven cases followed at the Tumor Clinic over the past two years are reviewed and seem to bear out these contentions.

#### REFERENCES

Am. Jour. Roent.:	31:527-529, 1934
Brit. Jour. Surg.:	21:238-243, 1934
Hopital:	21:736-737, 1933
Presse med.:	41:345-347, 1933
Presse med.:	41:544-546, 1933

Ewing, James: Neoplastic Diseases.

Stout, Arthur Purdy: Human Cancer.

Gans, J. quoted by Stout.

#### THE SHREVEPORT EYE, EAR, NOSE AND THROAT SOCIETY

The Shreveport Eye, Ear, Nose and Throat Society met in regular session at the Charity Hospital, the evening of Monday, December 2, 1935, at 7:30 o'clock. The President, Dr. John T. Crebbin presided. The following members were present: Drs. Boaz, Bean, I Henry Smith, Atkins, Crebbin, Wilkinson, of Shreveport; Drs. Mann and Kirkpatrick of Texarkana, Ark.; and Dr. Robins of Texarkana, Texas.

The scientific program consisted of five cases:

1.—A patient of Dr. L. W. Gorton was presented, in his absence, by Dr. Atkins. It was an unusual cyst of sub-lingual region which had been reported by Dr. Gorton at a previous meeting. The cyst had been opened and drained beneath the tongue, later it had drained on the dorsal surface of the tongue near the base. Roentgen rays had been made with the view of locating possible calculus. All of the salivary ducts were patent and functioning normally. This case was of unusual interest due to the fact that it was difficult of diagnosis and had not yielded to treatment of any kind. After a lengthy discussion no definite conclusion was reached, and Dr. Gorton was requested to report on future developments at our next meeting.

2.—Dr. Mann presented an interesting case of glioma of the optic nerve which extended

back through the optic foramen and which he had removed by approaching through the cranium and superior orbital wall. He, also, enucleated the eye. To date the patient is well and shows no sign of recurrence.

3.—Dr. Boaz presented two cases; The first was a post-operative cataract of both eyes. The first eye operated on continues to show irritation and developed hypertension and anterior synechiae of the iris. He will probably enucleate this eye in an effort to save the other one. The second case which he presented was one of severe infection involving the anterior structures of both eyes, with corneal opacities and ulcerations resulting in blindness. No specific organisms have been found.

4.—Dr. Wilkinson presented a colored male suffering from neuralgic pains in the left side of the face and neck, the origin of which seems obscure. The patient's blood Wasserman is negative, but has shown some improvement under large doses of potassium iodide and mercury.

The minutes of the last meeting were read and approved.

The secretary read a letter from the Dallas Academy of Ophthalmology and Otolaryngology, inviting our society to meet with them on December 9, 1935, at which time Dr. Lillie of Mayo Clinic will speak.

The Shreveport Eye Ear Nose and Throat Society met in regular session at the Charity Hospital on Monday, January 6, 1936, at 7:30 o'clock. The following members were present: Drs. Scales, Boaz, Gorton, I. Henry Smith, LaRue, Beene, Wilkinson of Shreveport; Dr. Mann of Texarkana; Dr. Carter of Marshall; and Drs. Long and Green of Longview.

The scientific program consisted of seven cases:

1—Dr. Long presented a young man suffering from glaucoma with areas of choroiditis, vitreous opacities, and fine punctate deposits on Decemet's membrane. The tension was 40 (McLean). Although he was being treated with atropin, the tension was not increased.

2—Dr. Scales presented four cases; the first being a post-operative cataract in an old negro man. The lens was removed intracapsularly after considerable difficulty due to the lens disappearing into the vitreous chamber. The extraction was finally successful when the lens was floated into view by use of anterior chamber irrigation. The end result was very good.

3—The next case presented by Dr. Scales was one of traumatic symblepharon. Several operative procedures for this condition were

advanced by Dr. Scales and discussed by those present.

4—His third case was a perforating wound of the cornea extending through the root of the iris and penetrating the lens.

5—The last case presented by Dr. Scales was one of trachoma.

6—Dr. Boaz presented a 74 year old white male, who had had an operation for cataract elsewhere. His eye was very much inflamed and the pupil was filled with lens debris. There was very little vision in this eye and the other was totally blind from an injury several years ago. The advisability of further operative procedure at this time was discussed.

7—Dr. Mann showed a stereoscopic picture of an obscure lid lesion. Several theories were advanced as to the diagnosis but no definite decision was reached.

The minutes of the last meeting were read and approved.

Announcement was made of the coming examinations of the American Board of Ophthalmology.

John T. Crebbin, Pres.  
J. A. Wilkinson, Sec'y.

#### SCHUMPERT SANITARIUM

After dinner served in the sanitarium dining room, the evening of December 10, the staff assembled for scientific session, with Dr. George Garrett presiding. Twenty members and six visitors were present.

The minutes of the last meeting were read and adopted.

For the membership committee, Dr. Erickson as chairman reported approval of the application of Dr. Paul Winder. On motion as put by the president, Dr. Winder was unanimously voted a member of the staff.

There was no unfinished or new business.

Dr. George Garrett introduced the visitors, Drs. McDade, Fletcher, Perrino, Corliss, Kinnard and Garrett, Sr.

Dr. Atkins called the attention of the staff to the death of Dr. McDade's brother, and this matter was referred to the memorial committee for proper action.

Scientific Program:—(1) A discussion of diabetic coma, with presentation of a case, was presented by Drs. H. B. Wren, Cohenour and J. B. Birdwell. The case report concerned a white female adult who entered the institution after 12 hours in coma. Despite the administration of ample fluids, dextrose and 225 units of insulin and a temporary cessation of the comatose state, the patient died, apparently from diabetic toxemia.

In the discussion, Dr. Hargrove suggested peri-

pheral vascular failure from shock as a possible cause of death, and Dr. Norfleet raised the question of pulmonary disease. Discussion was closed by Drs. Wren and Cohenour.

(2). Dr. B. C. Garrett reported two cases of symmetrical gangrene of the lower extremities, treated by amputations. Postmortem examination of the first case, a white male adult, demonstrated aneurysm of the heart, with embolism of the peripheral vessels as cause of the gangrene.

The second case, in a white male of 72 years, was apparently caused by Buerger's disease. This patient is still living. These cases were discussed by Drs. Norfleet and Corliss.

One death for the month of November, caused by laryngeal diphtheria, was discussed by Dr. Norfleet.

Dr. George Garrett announced the committees to serve for the coming year.

C. H. Webb, M. D., Secretary-Treasurer.

## TRANSACTIONS OF ORLEANS PARISH MEDICAL SOCIETY

### CALENDAR

FEBRUARY 3 Eye, Ear, Nose and Throat Hospital Staff, 8 P. M.

FEBRUARY 5 Clinico-Pathological Conference Touro Infirmary, 11:15 A. M. to 12:15 P. M.

FEBRUARY 5 Mercy Hospital Staff, 8 P. M.

FEBRUARY 7 Pathological Conference, Hotel Dieu, 11 A. M. to 12 Noon.

FEBRUARY 10 ORLEANS PARISH MEDICAL SOCIETY, 8 P. M.

FEBRUARY 12 Touro Infirmary Staff, 8 P. M.

FEBRUARY 14 Pathological Conference, Hotel Dieu, 11 A. M. to 12 Noon.

FEBRUARY 14 French Hospital Staff, 8 P. M.

FEBRUARY 17 Hotel Dieu Staff, 8 P. M.

FEBRUARY 18 Charity Hospital Medical Staff 8 P. M.

FEBRUARY 19 Clinico-Pathological Conference, Touro Infirmary, 11:15 A. M. to 12:15 P. M.

FEBRUARY 19 Charity Hospital Surgical Staff, 8 P. M.

FEBRUARY 20 Eye, Ear, Nose and Throat Club, 8 P. M.

FEBRUARY 21 Pathological Conference, Hotel Dieu, 11 A. M. to 12 Noon.

FEBRUARY 21 I. C. R. R. Hospital Staff, 12 Noon.

FEBRUARY 24 ORLEANS PARISH MEDICAL SOCIETY, 8 P. M.

FEBRUARY 25 Baptist Hospital Staff, 8 P. M.

FEBRUARY 26 Clinico-Pathological Conference, Touro Infirmary, 11:15 A. M. to 12:15 P. M.

FEBRUARY 28 Pathological Conference, Hotel Dieu, 11 A. M. to 12 Noon.

During January, besides the joint meeting of the 1935 and 1936 Boards of Directors, the Society held its annual Installation Meeting and one regular scientific meeting.

At the Installation Meeting, held January 13, Dr. Val H. Fuchs, retiring President read his report for 1935. Dr. Frederick L. Fenno read his Inaugural Address. The Most Reverend Archbishop Joseph Francis Rummel was the Orator of the evening his subject being, The Church and the Medical Profession.

The following Officers for 1936 were installed:

President—Dr. Frederick L. Fenno

First Vice-President—Dr. Foster M. Johns

Second Vice-President—Dr. Edwin L. Zander

Third Vice-President—Dr. J. Raymond Hume

Secretary—Dr. Gilbert C. Anderson

Treasurer—Dr. Shirley C. Lyons

Librarian—Dr. Alton Ochsner

### ADDITIONAL MEMBERS

### BOARD OF DIRECTORS

Dr. Val H. Fuchs

Dr. Edwin H. Lawson

Dr. C. L. Peacock

The meeting then adjourned and the first "get-together" for 1936 was held in the basement for members only.

At the meeting of January 27, the following program was presented:

The Mortality of Acute Appendicitis: An analysis of 156 Fatalities.

By:.....Drs. Urban Maes and F. F. Boyce

Mr. Earle A. Rowell, National Educational Director of the American White Cross Anti-Narcotic Society gave a report on Recent Developments in Fighting the Dope Traffic.

Annual reports of the Officers and Special and Standing Committees for 1935 were read by the Chairmen.

It has come to the attention of the Board of Directors that some physicians have been referring patients to the Public Health Institute with request for laboratory procedures. YOU ARE REMINDED THAT THIS INSTITUTE IS AN UNETHICAL INSTITUTION AND MEMBERS OF THIS SOCIETY ARE FORBIDDEN TO ASSOCIATE THEMSELVES WITH SUCH AN ORGANIZATION IN ANY WAY.

The Woman's Auxiliary of the Orleans Parish Medical Society has on hand articles of clothing to be given to medical students requiring same. It is suggested that various faculty members notify students apparently in need of such articles that same can be obtained from this group or



these articles can be obtained by the members of the Society and given to those students apparently in need. The names of the students receiving such benefits need not be given to the Auxiliary.

Mrs. C. L. Peacock, Chairman of the Committee of the Woman's Auxiliary in charge of collecting the samples from doctors' offices, is anxious to hear from those physicians who are desirous of getting rid of samples and will be glad to call as soon as she is notified.

Drs. L. S. Fortenberry and Michael A. Ogden were elected to Active Membership. Dr. Georgiana J. von Langermann was elected to Interne Membership.

The Society is anxious for annual dues to be paid at this time. Kindly forward to the Treasurer your check for \$18.00 covering dues for 1936 for both Orleans Parish and Louisiana State Medical Societies by return mail.

#### TREASURER'S REPORT

ACTUAL BOOK BALANCE: 11/30/35:.....\$ 715.63  
 December Credits .....\$ 908.74  
 TOTAL CREDITS: .....\$1,624.37  
 December Expenditures: .....\$ 880.68  
 ACTUAL BOOK BALANCE 12/31/35:.....\$ 743.69

#### LIBRARIAN'S REPORT

During December, 36 books have been added to the Library, of which one was received by gift, 23 by binding and 12 by purchase.

Material has been collected by members of the staff on the following subjects:

Action of emetine  
 Toxicology of novocain  
 Personal bibliography of D. C. Browne  
 Fractures of neck of humerus  
 Congenital heart disease  
 Osteogenesis imperfecta  
 Heredity of epilepsy  
 Relation of otolaryngologist to general practitioner  
 Dentigenous cysts  
 Leonard Wood Memorial  
 History of thyroid disease  
 Thrombosis of vena cava  
 Estimation of ascorbic acid by titration  
 Effect of ether and ethylene on intestinal tract  
 Histamine stimulation upon gastric secretion  
 Effect of insulin upon carbohydrate metabolism in diabetic

Use of amytal for prolonged narcosis  
 Experimental aneurism  
 Superficial infections  
 Fear phobia  
 Endobronchial carcinoma  
 Children's fears

In this connection, a brief resume of the work of the Library during 1935 is in order. In this period 728 books have been added to the Library. A table showing the source from which we have received them and a comparison with 1934 shows:

	Binding	Gift	Journal	Purchase	Total
1935	265	312	119	32	728
1934	284	210	87	51	632

It will be noted that the increase occurs in material which we have received without cost. Numbers of volumes bound and books purchased showed a decrease even from 1934, which was the lowest since 1920 before this current year.

There were on December 31, 1935, 21,032 volumes in our Library. We receive currently by subscription and gift, approximately 250 medical periodicals.

The reference service given in this Library to the profession by members of the staff is worthy of particular mention, since this is a field entirely omitted in many libraries,—doctors being required to gather all their own references. Our Library staff has during 1935 collected material on 192 different subjects, at the particular request of physicians,—all of this in addition to calls for specific titles and for needs which could be filled at once by books or by use of the card catalog.

This Library and that of Tulane University School of Medicine have circulated to doctors alone 8,474 volumes during 1935,—or more than 16 to each member of the Society. It should be noted that books are taken from the Library by doctors for two weeks, subject to renewal for that period in case the book has not been called for by another. Almost every book circulated is in use away from the Library for from seven to twenty-one days. This is entirely exclusive of books loaned to students for overnight use (8,883 volumes for 1935). It is also exclusive of the great use of material in the Library in the Reading Rooms. The total number of books and journals loaned during 1935 to students and doctors was 17,357.

Miss Marshall represented your Library at the annual sessions of the Medical Library Association for the ninth consecutive year, thereby being enabled to establish interlibrary relations of inestimable value to our own Library.

Gilbert C. Anderson, M. D.,  
 Secretary

## LOUISIANA STATE MEDICAL SOCIETY NEWS

## SHREVEPORT MEDICAL SOCIETY

Meeting of December 3, 1935.

The regular meeting of the Shreveport Medical Society was called to order by the President with fifty members present. The minutes of the previous regular meeting and special meeting were read and adopted.

**Annual Reports:** The annual report of the Secretary was read and adopted. The annual report of the Treasurer was read and adopted. The annual presidential report was read and adopted. Brief reports were given by Dr. Lucas, Chairman Social Affairs Committee, Dr. J. D. Young, Chairman Public Relations and Publicity Committee, Dr. Herold, Chairman Periodic Health Examinations Committee, Dr. Pirkle, Chairman Permanent Home Committee.

**Committee Reports:** Dr. Bodenheimer, Chairman of Committee to investigate the application of Dr. Hankins for membership, read a letter from Dr. Hankins, requesting that his application be withdrawn. Dr. Webb, Chairman of Special committee to investigate the W. P. A., authorized at the previous special meeting, read a report. The report was ordered filed by the Society.

**Unfinished Business:** A letter from Dr. Roy B. Harrison, in answer to one written to him by the Society, regarding illegal practitioners in Shreveport, was read and ordered filed.

**New Business:** Application for membership in the Society from Dr. M. R. Purnell was read and, upon motion of Dr. Barrow, The Society ordered that the application be received and take the usual course. Dr. Bodenheimer made a motion that a special committee be appointed by the new President to consider the recommendations made by the outgoing President. This was duly carried. Dr. Young made a motion that the Secretary write to Station KWKH and thank them for their co-operation in the medical broadcast. This motion was duly carried. A letter from Dr. Goldbacher, Philadelphia, was read, in which he requested the sanction of the Society in holding a postgraduate course in Proctology at Shreveport Charity Hospital. Dr. Pirkle made a motion that the Secretary write the Philadelphia Medical Society and determine Dr. Goldbacher's status. This motion was duly seconded and carried. Dr. Herold, speaking for Dr. Gilmer, asked the reaction of the Society in a contemplated tuberculosis survey being carried out in the Parish schools. This was discussed briefly by Drs. Bodenheimer, McIntyre, Webb and Knighton, Sr. Dr. Bodenheimer moved that the Society go on record as having no objection to this proposition. This motion was duly carried. Dr. Barrow stated that he had been re-

quested to represent the negative side of a public debate on the proposition that Medical Aid Should be Furnished at Public Expense, and he wanted to know the reaction of the Society to this matter. Dr. Lloyd made a motion that Dr. Barrow be endorsed as the representative of the Shreveport Medical Society in this debate. This motion was unanimously carried.

**Election of Officers:** The following officers were nominated and unanimously elected:

President—Dr. C. P. Rutledge  
First vice-president—Dr. J. A. Wilkinson  
Second vice-president—Dr. W. J. Norfleet  
Treasurer—Dr. D. R. McIntyre  
Secretary—Dr. P. D. Abramson  
Historian—Dr. J. M. Bodenheimer

Delegates for one year term: Dr. J. M. Gorton  
Dr. G. A. Caldwell, Dr. J. A. Hendrick, Dr. J. T. Crebbin.

On motion of Dr. Knighton, the officers for 1935 were given a rising vote of thanks by the members of the Society.

There being no further business, the meeting adjourned at 9 P. M.

Paul D. Abramson, Secretary

Meeting of January 7, 1936.

The regular meeting of the Shreveport Medical Society was called to order by the President, Dr. Rutledge, with 50 regular members and two guests present. Following the brief statement of his plans by the new President, and the naming of committees, the minutes of the previous meeting were read and adopted.

**Report of Treasurer:** The Treasurer reported that sixty members had paid their 1936 dues to date.

**Scientific Program:** Dr. Ruffin Paine, after briefly indicating the problems of Endocrinology and the needs for simplification, explained his ductless and mixed gland indicator. Several favorable comments were made, complimenting Dr. Paine on his ingenuity.

**Unfinished Business:** The Committee on the application for membership of Dr. M. R. Purnell rendered a favorable report and, on motion duly seconded and carried, the rules were suspended and Dr. Purnell was unanimously elected by open ballot. A letter from the Philadelphia County Medical Society was read, in answer to inquiry regarding the status of Dr. Lawrence Goldbacher, in which it was stated that he was a member in good standing of that Society. Following considerable discussion, Dr. Bodenheimer introduced a resolution that the Society disapprove the holding of all Clinics, where a fee is charged, unless con-

ducted by a regular, legally constituted medical organization. This motion was duly seconded and carried.

New Business: Application for membership of Dr. R. E. Corkern was received, and the Society moved that it take the usual course. The Committee appointed to investigate Dr. Corkern's application is composed of Dr. W. B. Allums, Chairman, Dr. C. R. Mays and Dr. O. O. Jones. Dr. Herold offered to contribute to the building fund of the Society a balance held to the account of the former Academy of Medicine. The Society voted to accept this donation. Congratulatory letters from the following organizations were read: Lowe-McFarlane Post, American Legion, Shreveport Chamber of Commerce, City Council, Schumpert Sanitarium Staff, Caddo-Shreveport Health Unit, Caddo Parish School Board, North Louisiana Sanitarium, Highland Sanitarium and Tri-State Hospital. On motion, duly seconded and carried, the Secretary was instructed to acknowledge the above letters and to express thanks to the M. & D. and Medical Arts Drug Stores for the courtesy of the buffet supper.

There being no further business, the meeting adjourned at 8:45 P. M., to partake of light refreshments.

Paul D. Abramson, M. D., Secretary

#### DE SOTO PARISH MEDICAL SOCIETY

At a meeting of the DeSoto Parish Medical Society held at Mansfield, December 17, 1935, the following officers were elected:

President—W. G. Jones, Mansfield

Vice-President—B. P. Smith, Keatchie

Sec. Treas.—R. A. Tharp, Mansfield

Delegate to the State Society—R. A. Tharp, Mansfield.

Alternate delegate—W. G. Jones, Mansfield.

This was the only business to come before the meeting.

The paid up membership so far this year consists of the above named doctors, and Dr. R. P. Thaxton, Pelican. There are several more who will pay up before the annual meeting, I am sure.

R. A. Tharp, Sec.-Treas.

#### ST. TAMMANY PARISH MEDICAL SOCIETY

The St. Tammany Parish Medical Society met at the Southern Hotel, in Covington, on January 10, for the purpose of installing their newly-elected officers for the ensuing year, as follows: Dr. J. F. Polk, Slidell, president; Dr. H. D. Bulloch, Covington, vice president; Dr. F. R. Singleton, Slidell, secretary; Dr. Roy Carl Young, delegate to state society; Dr. J. K. Griffith, alternate delegate to state society.

The society was honored with the presence of Dr. P. T. Talbot of New Orleans, secretary and

treasurer of the state society; Dr. Dan S. Silverman of New Orleans and Dr. J. A. Lanford of New Orleans.

The visiting physicians gave us some interesting talks on the efforts that were being made in the interest of medicine and made some suggestions of what should be done this year by the component societies.

The meeting was a huge success from every standpoint, and the meeting adjourned to meet again in March in Slidell.

Dr. H. D. Bulloch, Secretary.

#### MAGNOLIA SCHOOL

The Magnolia School, a school conducted for children whose mental or physical development has not progressed normally, has been in operation since October 1, 1935. It is located on Central Avenue and the River Road in Jefferson Parish just off Jefferson Highway No. 61.

This name was selected because of the environment and because of the fact that it is the state flower. The country site was chosen because of the advantages offered for healthful living and for learning the laws of nature.

The school is intended to provide a cultural home in which these retarded and handicapped children might receive training adapted to meet their individual needs. Competent medical and hygienic care and protection from harmful contacts are provided. Each pupil is examined thoroughly on entrance for his or her physical condition, intellectual attainment, and emotional personality development. In addition, educational tests are administered in order to discover the child's abilities and defects. The pupil is then assigned a program in keeping with his educational needs. Classroom work is under the guidance of teachers specially trained for the understanding and education of children needing special help. Individual psychological and psychiatric care is given whenever required. Emphasis is placed upon the development of habits, of cooperation, and application to tasks. Desirable special attitude, creative interest and personal independence is taught.

In addition to other classroom work, farming, including dairying, poultry raising, forestry and bird study, and the handicrafts are offered. Instruction is fitted to the needs and abilities of each and a special point made to encourage every sign of spontaneous, creative effort.

Mrs. L. S. Davis is in charge and is assisted by Mrs. E. Hyman and Mrs. B. C. Dryfoos. Mrs. Lottie Miller, who for years conducted a private school in New Orleans, is among the teachers.

The Department of Psychology at Tulane and Louisiana State Universities are co-operating to the fullest extent. Doctor Walter Lurie, Ph. D.,



assists in making the mental I. Q. test.

The following is a list of the Medical Board and the Board of Directors:

Medical Board—Dr. C. J. Bloom, General Chairman; Dr. R. G. Aleman, Dr. G. Anderson, Dr. W. W. Butterworth, Dr. F. L. Fenno, Dr. J. Graubarth, Dr. C. S. Holbrook, Dr. O. Joachim, Dr. M. Loeber, Dr. C. P. May, Dr. E. A. Socola, Dr. J. E. Strange, Dr. R. Strong, Dr. H. A. Bloom, Dr. F. Lejeune, Dr. G. J. Taquino.

Board of Directors—Rabbi Louis Binstock, Mrs. J. Algernon Badger, Mrs. Robert E. Craig, Mrs. T. Jeff Feibleman, Rev. Father Joseph Girvin, Mrs. Allen S. Hackett, Mrs. Robert Hanna, Mrs. Herbert Hiller, Mrs. Larz E. Jones, Mrs. Isaac Lowenburg, Right Rev. James Craik Morris, Mrs. James W. Reily, Mrs. James W. Ross, Mrs. Raymond Saal, Mrs. Edgar B. Stern, Mrs. Roger T. Stone, Mrs. Leonard Wise.

#### TUBERCULOSIS AND PUBLIC HEALTH ASSOCIATION OF LOUISIANA

The annual meeting of this organization was held January 29 in the Auditorium of Tulane Medical School under the presidency of Dr. W. H. Seemann. Appearing on the program were: Drs. John Signorelli, Myer Epstein, John H. Musser, L. L. Lumsden and Mr. Gilbert B. Cooley. At the luncheon, which was presided over by Dr. I. I. Lemann, Archbishop Rummel said grace, after which there was an address by Miss Erle Chambers of Little Rock. At the afternoon session Drs. Joseph Danna and H. E. Bernadas presided and addresses were given by Drs. Joseph A. O'Hara, Robert A. Strong, P. M. Payne and I. I. Lemann. An roentgen ray clinic conducted by Dr. Granger in association with Drs. Robbins and Jacobs completed the interesting all day session.

Dr. Carl C. Dauer, full time Assistant Professor of Preventive Medicine in the Graduate School of Medicine of The Tulane University of Louisiana, was invited to attend a conference on tuberculosis at the request of the National Tuberculosis Association at New York City in December. In an article appearing in the New York Times under date of December 27, 1935, it was stated by some of the authorities in attendance on that meeting that the "most important contribution in a decade to the knowledge of the tuberculosis problem in this country" was revealed by Dr. Dauer in a report made from a county by county survey through the Tennessee Valley on tuberculosis mortality by areas rather than by States.

Passed Assistant Surgeon J. A. Trautman has been directed to proceed from New Orleans, La. when official duties permit, to Houma, Romeville

and White Castle, La., and such other places in Louisiana as are necessary, in connection with studies of the serodiagnosis of syphilis.

Surgeon Peter J. Gorman was relieved from duty, on or about Dec. 18, 1935, at the U. S. Quarantine Station, New Orleans (Algiers) La., and assigned to duty at the U. S. Quarantine Station, Laredo, Texas, in charge of quarantine inspections and medical examination of aliens.

That the energetic and productive efforts of Dr. John A. Lanford and his Committee on the Control of Cancer is being recognized throughout the country, may be appreciated from the fact that he has been invited by the Board of Directors of the American Society for the Control of Cancer to attend the annual meeting of the board to be held in New York, and he has been requested to give a talk on the topic "What the State Medical Society Can Do in the Program of Cancer Education". This is a well merited honor to a man who has labored diligently and intelligently.

#### SOUTHWESTERN SECTIONAL MEETING OF COLLEGE OF SURGEONS

The southwestern sectional meeting of the American College of Surgeons this year will be held in Dallas, Texas, on Wednesday, Thursday, and Friday, March 4, 5, and 6. Headquarters will be at the Baker Hotel.

There will be included in this section the following states: Texas, Oklahoma, Arkansas, Louisiana, New Mexico, Arizona, and the republic of Mexico.

Some of the distinguished visitors from outside of the section who will be present on this occasion are: Dr. George Crile, Cleveland, Chairman, Board of Regents, American College of Surgeons; Dr. Alfred W. Adson, Rochester, Neurosurgeon, Mayo Clinic; Dr. Philip H. Kreuscher, Chicago, Associate Professor of Surgery, Northwestern University Medical School; Dr. Donald C. Balfour, Rochester, Professor of Surgery, University of Minnesota Medical School; Dr. Edward Jackson, Denver, Consulting Editor, American Journal of Ophthalmology; Dr. Alton Ochsner, New Orleans, Professor and Director of Surgery, Tulane University of Louisiana School of Medicine; Dr. Malcolm T. MacEachern, Chicago, Associate Director, American College of Surgeons; and Robert Jolly, Houston, Superintendent, Memorial Hospital and Past President, American Hospital Association.

A cordial invitation to attend this most interesting meeting is extended not only to the Fellows and hospitalists of the various states included, but to the entire medical profession at large.

#### THE AMERICAN COLLEGE OF PHYSICIANS The Twentieth Annual Session of the American

College of Physicians will be held in Detroit with headquarters at the Book-Cadillac Hotel, March 2-6, 1936.

Dr. James Alex. Miller, of New York City, is President of the College, and has arranged a program of general scientific sessions of great interest to those engaged in the practice of Internal Medicine and associated specialties. Dr. Charles G. Jennings, of Detroit, is the General Chairman of the Session, and is in charge of the program of clinics and demonstrations in the hospitals, medical schools and other Detroit institutions. Dr. James D. Bruce, Vice President in Charge of University Relations, University of Michigan, is Vice Chairman of the Committee on Arrangements, and has in charge the preparation of an all-day program to be conducted at the University of Michigan on Wednesday March 4. Dr. Walter B. Cannon, Professor of Physiology at Harvard University Medical School, will deliver the annual Convocation Oration on "The Role of Emotion in Disease". Dr. Miller's presidential address will be on "The Changing Order in Medicine". About fifty eminent authorities will present papers at the general scientific sessions, while clinics and demonstrations will be conducted at the Harper, Receiving, Ford, Grace, Herman Kiefer and Children's Hospitals, of Detroit.

#### INFECTIOUS DISEASES IN LOUISIANA

Dr. J. A. O'Hara, Epidemiologist for the State of Louisiana, has furnished us with the weekly morbidity reports for the State of Louisiana, which contain the following summarized information: For the week ending December 21 syphilis led all of the reportable diseases with 104 cases listed. Other diseases appearing in double figures in the order of their frequency were: pneumonia 50 cases, cancer 44, malaria 30, pulmonary tuberculosis 29, measles 22, influenza and diphtheria 21 each, scarlet fever and septicemia 12 each and 10 of chicken pox. Of the unusual diseases 1 case of poliomyelitis was reported from Claiborne Parish, 1 case of tularemia from Caddo, 1 of typhus fever from Orleans, 2 cases of undulant fever, 1 from Rapides and 1 from Orleans. For the next week of the year ending December 28, syphilis maintained its high lead over all other reportable diseases, 140 cases being sent to the offices of the State Board of Health. Pneumonia came next again as in the previous week, this time with 54 cases listed, followed by cancer with 35, diphtheria 23, measles 21, pulmonary tuberculosis 20, influenza and malaria 13 each and 10 of septicemia. Three cases of typhoid fever were reported this week, one each from Allen, E. Carroll and W. Carroll Parishes, and 4 cases of typhus fever from Caddo. The first week of the year ending January 4 showed another venereal disease, in this instance

gonorrhea with 70 cases leading the list. This disease was followed by 47 cases of pneumonia, 41 of pulmonary tuberculosis, 21 of measles, 20 of influenza, 15 of scarlet fever, 14 of cancer, 12 of chicken pox, and, remarkable to say, only 11 cases of syphilis, and equally encouraging only 10 cases of diphtheria. This week there was reported from Orleans Parish 1 case of epidemic cerebrospinal meningitis and 1 of undulant fever. For the second statistical week of the year ending January 11 pneumonia springs to a faint lead over syphilis with 63 cases of the former and 62 of the latter. Other double figure reportable diseases include chicken pox 42 cases, gonorrhea 35, measles and pulmonary tuberculosis 23 each, scarlet fever 18, cancer 16, influenza 15, diphtheria 13 and whooping cough 10. Of the rarer diseases a case of smallpox was discovered in Caldwell Parish and a case of meningitis in Orleans Parish. In this week there were only 4 cases of typhoid fever listed.

#### HEALTH OF NEW ORLEANS

The Department of Commerce, Bureau of Census reports that for the week ending December 14, 1935 there were 174 deaths in New Orleans with a death rate of 18.8. The several deaths were divided, white 97, rate 14.8 and colored 77, rate 28.8. The infant mortality was 71 for all infants; 38 for white children and 126 for the negro. For the next week which ended December 21 the total number of deaths was 185 and the rate of 20.0 was unusually high. Of the deaths 109 were in the white population and 76 in the colored. The death rate for the former was 16.6 and for the latter 28.4. The infant mortality rate was unusually low with a rate of 41, about equally divided between the two races. Christmas seems to have had a bad effect upon the death rate in the city, for the week ending December 28 an unusually large number of deaths occurred in the city, there being 206 deaths giving a rate of 22.3 compared with a death rate for the year as a whole of 16.4. The total deaths were divided 129 white and 77 colored; the death rate for the white population 19.7 and for the negro 28.8. The infant mortality was still below the rate for the year 1934 which was 82, it being only 77 divided almost exactly even between the two races. The first week of 1936 ending January 4 was an improvement over the last week of the preceding year although the total deaths was still higher than they had been on an average throughout the year. There were 186 deaths this week divided 109 white and 77 colored giving a rate for the group as a whole of 20.2; for the white 16.7 and for the colored 28.9. The infant mortality rate was still very low; only 46, which would have been considerably lower were

it not for the much higher rate in the negro infants than in the white.

### WOMAN'S AUXILIARY

#### Louisiana State Medical Society

Printed below, are a few excerpts from a letter received from Mrs. Rogers N. Herbert, President of the Woman's Auxiliary to the American Medical Association:

"In four months we will have finished our year's work. May 11-15 inclusive is the dates for the Convention, which will be held in Kansas City. Hotel Baltimore will be headquarters for the Auxiliary.

Each State Auxiliary shall be entitled to one delegate and one alternate.

Please extend to every member a cordial invitation as our entire membership is not only invited but urged to be present."

So, dear readers, it is not too soon to plan your vacation, bearing in mind also the fact that the Louisiana State Auxiliary meets in Lake Charles in April 27-29 inclusive.

"Hygeia" the health magazine published by the American Medical Association is really and truly an all-important item to have in the home, office and organizations to which you may belong.

When in doubt as to what to give for that birthday or anniversary, remember that a subscription to "Hygeia" will be a long and well-remembered gift and one that will spread the knowledge of sane and healthy living.

Mrs. George D. Feldner,  
Chairman Press & Publicity

#### ORLEANS PARISH

We are happy to welcome into our circle, two new members-at-large, Mrs. Nicholas K. Edington, 2816 State Street and Mrs. J. M. Mosely, Lakeland, La.

Plans for an appropriate celebration of "Doctor's Day" in March were very diligently discussed at our January meeting. More facts concerning this party will be given at a later date.

Mrs. Ralph J. Christman,  
Publicity Chairman

#### CADDO PARISH

The Woman's Auxiliary to the Shreveport Medical Society celebrated their eighth birthday at the January meeting. Following a short business session, Mrs. J. M. Bodenheimer gave a current event on "Medical Practice in the Soviet." Mrs. Edwin Lowe Gill reviewed in an interesting manner, Anne Morrow Lindbergh's book "North to the Orient."

The members were invited into the dining-room where refreshments were served and the birthday cake with its eight candles was cut. The table

was centered with the birthday cake surrounded by a lovely arrangement of calla lilies in silver vases with white tapers burning in silver candelabra on either side. As the candles were lit by the past presidents, each made a wish. Mrs. S. A. Collon, Sr. of Texarkana lit the last candle as she had helped organize this auxiliary. This lovely birthday party was enjoyed by fifty-five members.

Mrs. Johnson R. Anderson  
Publicity Chairman

#### JEFFERSON DAVIS PARISH

While the meetings of the Woman's Auxiliary to the Jefferson Davis Parish Medical Society have not been reported since they resumed their meetings after the summer, they have held regular monthly meetings beginning in October. This meeting was held at the home of Mrs. G. W. Remage in Jennings with members present from Jennings, Welsh and Crowley, Acadia Parish. We were pleased to have a new member, Mrs. C. F. Lacey of Jennings, whose husband is in charge of the recently organized health unit in this parish.

The November meeting was held in Welsh at the home of the President, Mrs. R. R. Arceneaux. Mrs. Arceneaux had recently returned from Detroit where she had accompanied her husband to the International Post-graduate Assembly of North America and she gave an interesting account of her trip. The auxiliary decided at this meeting to place a six months subscription to Hygeia in the Jennings and Welsh High Schools.

Mrs. Arceneaux was hostess again at the December meeting.

The January meeting was held in Crowley with Mrs. J. W. Faulk, member-at-large, hostess for the occasion. The Acadia Parish Health Unit nurse, Miss Annie McLeod, was present at this meeting and gave a most interesting and instructive talk on "Milestones in Public Health."

The meetings have all been well attended and enjoyed. While we have not attempted to have any set program, the members always respond to the president's request to contribute something interesting and educational along health lines. Outstanding among the contributions was an article from the Reader's Digest telling of the Leprosarium at Carville. The original article, "The Strangest Post in the World," appeared in the American Legion Monthly and was written by Sam H. Jones of Lake Charles. Of special interest too, was the radio broadcast "First Aid to the Unconscious" sponsored by the American Medical Association and published in the December Hygeia.

A social hour has always been most thoroughly enjoyed at each meeting. Perhaps becoming acquainted may be our chief accomplishment so far,



but we believe it has been worthwhile, for though we are few, most of the acquaintances have been made through the auxiliary.

Two weddings of interest have taken place lately. Robert Smith son of Dr. Morgan Smith of

Jennings, was married to Miss Oleain Pate of Texas, and Dr. John G. McClure of Welsh was married to Miss Frances Doiron of Thornwell, La.

Mrs. Claude A. Martin  
Publicity Chairman

## BOOK REVIEWS

*Diseases of the Nose and Throat:* By Charles J. Imperatori, M. D., F. A. C. S., and Herman J. Burman, M. D. Philadelphia, J. B. Lippincott Co., 1935. pp. 697. Price \$7.00.

The well known authors of this new text have given us an unusual arrangement of well chosen material for the instruction of the beginner, and at the same time a comprehensive volume well adapted for quick reference by the general practitioner. The experienced rhinolaryngologist also will find much of interest here.

The 697 pages of text include 480 well executed figures. An outstanding feature of the book is the attention to small details in minor procedures. The chapter on examination of the patient is very illuminating.

Noteworthy chapters are those on laboratory aids, general diseases in the nose and throat, uses and dangers of cocaine, allergic diseases, radium and roentgen ray, and physical therapy.

Much could be said about the many splendid features, and due credit must be given the authors for the contribution of a most useful addition to the library of the student, general practitioner and specialist.

H. KEARNEY, M. D.

*An Introduction to Public Health:* By Harry S. Mustard, M. D., New York. The MacMillan Company, 1935. pp. 250. Price \$2.50.

This book is essentially what the title suggests, an introduction to public health. As an outline the book should prove to be quite useful in teaching public health. Its weakness lies in its brevity.

The first chapter describes briefly the background of public health organization and traces its development. A chapter is given to a consideration of the collection, tabulation and interpretation of vital statistics. The chapter on the organization of public health work is brief—too brief to describe adequately this phase of public health.

In the chapter on the acute communicable diseases it appears to the reviewer that the more important preventive inoculation agents should have been given more consideration. In the discussion of diphtheria, toxin—antitoxin is not mentioned and the alum precipitated toxoid is dismissed with only a few lines. Passive immunization against measles is barely mentioned. On the other hand considerable space is given to describing the use of typhoid vaccine and none to the most important

preventive measures against typhoid fever—improvement in sanitation of the community. Scarlet fever immunization is hardly mentioned. One living in an endemic malarial area would find the two paragraphs devoted to this disease very inadequate. Some recent work in control of rabies in dogs appears to contradict the author's statements regarding the problem of control of canine rabies. Amebiasis is not mentioned in the discussion of parasitic diseases.

Sanitation of the community is outlined in a single chapter as is personal or individual hygiene. The remainder of the book takes up a consideration of maternal and child hygiene, and the public health aspects of cancer, heart disease, and mental hygiene in the public health program.

C. C. DAUER, M. D.

*A Marriage Manual: Practical Guide-Book to Sex and Marriages* By Hannah M. Stone, M. D. and Abraham Stone, M. D. New York, Simon & Schuster, 1935. pp. 334.

The wide experience of Drs. Hannah and Abraham Stone in the field of marital relations, has taught them that ignorance and the antiquated idea that anything pertaining to sex life is taboo, are the cause of many unhappy marriages. Neurotic states are developed which if not corrected, become in time irreparable.

The manual is unique, being dialogues between patient and doctor, and developing the numerous phases of sex life so essential to the future happiness of the couple embarking upon the voyage of matrimony.

It should be read by all physicians and should be available for ready reference when advice is necessary in problems of misapprehension or maladjustment of sex origin.

ADOLPH JACOBS, M. D.

*The Human Foot—Its Evolution, Physiology and Functional Disorders:* By Dudley J. Morton, New York City. Columbia University Press, 1935. pp. 244. Illus. Price \$3.00.

Rarely does it come to a reviewer the privilege of reading such a complete work on any subject as had this most excellent publication.

The author has drawn upon his experiences in Africa for his study of the feet of the aborigines.

His treatment of the evolution of limbs, with modification for weight-bearing, includes the study of the lowest form of vertebrate limbs,

through the amphibian and reptile, to the development of the human foot of the present day.

Much science and common sense are included in his chapters on examination of feet, and his treatment of foot disorders, and his condemnation of unscrupulous, high-pressure shoe salesmen is excellently given.

For the orthopedist, the surgeon, and the medical man interested in the disorders of the feet, this book should prove invaluable.

The reviewer again wishes to express his complete satisfaction in having had the privilege of reviewing such an excellent work.

DUDLEY M. STEWART, M. D.

*Arthritis and Rheumatoid Conditions. Their Nature and Treatment:* By Ralph Pemberton, M. D., F. A. C. P. Philadelphia, Lea & Febiger, 1935. 2d ed. rev. pp. 455. Price \$5.50.

Such an important subject discussed by such a distinguished and experienced writer offers a real treat to those physicians who are interested in the modern handling of these various so-called arthritic manifestations. The arrangement and contents of this treatise along modern conception of the etiological and pathological factors is most elucidating. The lengthy chapter on treatment is especially interesting as it is so well fortified with accurate clinical data as to be almost conclusive. Certainly the wide experience which the writer has had and the facilities with which he has surrounded himself should properly evaluate the results of the therapy offered, as well as the proper steps in helping to standardize not only all knowledge concerning the etiology and pathology but modern day conception and appropriate therapy. As one glances through the pages, the spirit, manner and the tense sincerity of the writer, are so deeply impressed upon one that he soon unconsciously begins to absorb gradually some of the factors as brought out in this presentation.

Any one interested in this subject of great social importance will be well repaid for reading this excellent treatise by Dr. Pemberton.

P. T. TALBOT, M. D.

*Food and Beverage Analyses:* By Milton A. Bridges, M. S., M. D., F. A. C. P., Philadelphia, Lea & Febiger, 1935. pp. 246. Price \$3.50.

Bulletin 28 of the Department of Agriculture many years ago summarized some extremely important facts on nutrition. For several decades vast amount of comparable information has appeared in isolated studies since the food analytic tables of Atwater and Bryant were published. However, this information has not been sufficient to cover all foods, particularly many of the newer food compositions that are canned or come in packages. Dr. Bridges has collected all the available information, in addition to which he has had

made a very large number of analytic studies of foods about which no information could be obtained in the literature. The result has been the production of a book which should be of extreme value to every one interested in nutrition from any point of view. The table of nutritive and caloric value of foods is over 120 pages long. This indicates how complete has been the compilation concerning foods of any kind. As a matter of fact in looking over the list of edible substances it was impossible to find one that was not listed. Other valuable features are contained in the chapters which have to do with the mineral constituents of foods and the vitamin content. There is considerable more information than this in the work, not the least of which, it might be of interest to know, are the data concerning the composition of cocktails, cobblers, fizzes, rickeys, pousse cafés, and flips.

After this brief sketch of the contents of Bridges' work it hardly seems necessary to add that a real need has been supplied by gathering together the facts concerning foods and beverages. The bibliography is reasonably complete but might well have been made more extensive than it is.

J. H. MUSSER, M. D.

*Apparatus & Technique for Roentgenography of the Chest:* By Charles Weyl, S. Reid Warren, Jr., Springfield, Ill. Charles C. Thomas, 1935. pp. 166. Price \$5.00.

The technical phase of radiology has received much consideration in recent years. Instead of an empirical method of procedure which was in vogue for many years, today the technical end of radiology is based upon sound scientific ground, where results, when satisfactory, can be duplicated as well.

The authors present a unique book which gives minute detail of certain scientific knowledge so necessary in roentgenological chest. In fact, this knowledge may be used in examining almost any part of the human body.

This book, however, will hardly be appreciated by radiological technicians as it is complete with explanation of certain physical factors which the ordinary technician can not understand, and perhaps this may apply to a large number of physicians using roentgen ray apparatus in the diagnostic field of chest work.

The authors have been very successful in explaining the physical phenomenon underlying roentgenography: available roentgenographic equipment and its limitations; the practical application of such equipment for chest roentgenography; and the methods of measurement and standardization or roentgenographic apparatus and technique. This book contains 166 pages, divided into four chapters. There are numerous good illustrations.

LEON J. MENVILLE, M. D.

*Fifty Years A Surgeon:* By Robert T. Morris, M. D. New York: E. P. Dutton & Co., Inc., 1935. pp. 346. Price \$3.50.

The autobiography of any physician ought to be interesting. The details of the life of a man who has been active in his profession should arouse the expectancy of enjoyable hours of reading. When a man has led an active professional life, a career with such broad interests as has Dr. Morris, and when this man has looked upon the various problems of life with a philosophic mind and will discuss these problems thoughtfully as well as interestingly in a book about himself, then the book should be a notable one. It is.

Dr. Morris began to practice medicine fifty years ago. Prior to that time he had become interested in biology and through this interest he decided to go into medicine. His choice was a happy one as always apparently his love of medicine was continuously sustained through all his fifty years of practice. His early studies were conducted at Cornell. Particularly fortunate was this medical neophyte to have the opportunity of carrying on extra-curricular work with two outstanding practitioners of medicine. From them he learned that not only must the practitioner have a persistent interest in his patients and must love them and his profession but also that the doctor must be a man of physical strength and endurance far beyond ordinary folk.

The account of the medical schools of the eighties is most fascinating. The college course was short and brief; the students appreciated their instructors. The utterly disillusioning belief that the medical student of that decade was always a ruffian and a rowdy he states was untrue as there was not a trace of these two characteristics in his medical school associates. At this time the microscope was an unusual adjuvant to medical learning. Microbes were not believed in; aseptic surgery was virtually a thing of the future. Instruments of precision were rare. The doctor wrote detailed prescriptions and did not depend upon the merchandizing pharmacist.

Dr. Morris' comments on his early training are interesting. Financial returns, says he, were and are not the chief activating motives for young men to go into medicine; the contacts with life are invaluable. The doctor early should learn to conceal his thoughts and his ideas. He must be a responsible individualist. Above all he must care for his fellowmen. The description of the introduction of antiseptics in New York is filled with curious incidents. It was through Morris largely that it was brought to the attention of New York physicians and part of this was accomplished by his going to London to watch Lister work. The sketches in a succeeding chapter show how the technic of surgery advanced. In spite of the fact that Crawford and Long used ether first

in surgery in 1842, thirty years later there was much controversy over the relative values of ether and chloroform. It was in 1895 that the roentgen ray became available for the use of the surgeon and it was not until about this time that hospitals generally began to be common places of treatment for patients other than the indigent. The doctor of the eighties was always extremely formal, garbed in a dark frock coat, silk hat; levity was far from his thoughts. Austerity might have become the dominant character of doctors of those days were it not for their devoted care of the sick.

Early in his life he decided to specialize and the specialty he selected was that in which he had always been interested, surgery. He took an extremely wise step in confining his work entirely to surgery. This was a bold move in those days for few men limited themselves to any one branch or division of medicine. The result is shown not in the first few years of his struggling surgical life but in the later years when he reaped the results of his foresight.

The next few chapters are devoted to surgical technic and procedures which are extremely important. Told entertainingly the layman and the medical man would get a splendid idea of how surgery developed in these formative and later years of this great surgeon's life. The chapter on appendicitis is particularly worth while. Further then he discusses his experimental work and what he had attempted to do by clinical research and observation. One of the sidelights in this chapter has to do with Matas' work on closing arterial orifices in aneurysms.

The chapter on the general practitioner is most enlightening. Morris has a tremendous admiration for the general practitioner, for what he does, for what he accomplishes and for what he means to his patients. He makes the statement that in a short experience with the Whittemores he learned that people develop love and loyalty to the family doctor that does not go to the specialist. He states that he believes the general practitioner, the guide, counsellor and friend of the family, will return sometime or another in full force. He accentuates the importance of knowing the patient and how some fragmentary bit of knowledge known to the practitioner concerning the individual will result in the proper diagnosis which the specialist may have missed. In the chapter on osteopathy he gives credit for physical measures in the treatment of disease but he points out that the great evil is that cultists propagate falsehoods and retain them. In the next chapter he exposes the irrationality of certain fads and many cures. Rather entertaining is the statement that many people pick up certain fads because they are under the patronage of those high in society, or even royalty.



In writing about psychoanalysis and metaphysics of course Freud is discussed broadly. He gives credit to Freud for bringing out certain essential features in the development of many psychoses and neuroses, but he really does not give him very much credit. He is prejudiced against Freudians largely because they fail to check the psychic expressions of disease by physical measures. In discussing Freud further he says that according to biology there are a few sex sins aside from those belonging to pathology. Sex sins are based on artificial standards formulated to fit monogamy. The sinner is the individual who talks about his escapades! He ridicules the statement that psychoanalytic teachings have corrupted college girls, most of whom have laughed when quoting Freud's concepts to him. The next chapter follows logically the preceding one. It has to do with sex and birth control and his feelings about it. He says that sex life has been confused, with ethics, that the doctor early learns that sex is physical. Ethics are constructed for the common good. The doctor regards sex ethics as a sort of 18th amendment to the physical constitution. In the male a dynamic physiologic agent subverts all other factors. Women cannot understand this. Birth control is of value because it should in theory trim out "barbarians" and allow the best to survive. Actually the intelligent practice birth control, the unintelligent do not; at the present time this is a distinct disadvantage to civilization. Sexual caprice and aversion go with high cultural developments and ease of living. This is based on the observations of Beebe who found that animals and birds become sterile in the midst of food and warmth.

Morris now skips to an entirely different subject, that having to do with professional jealousies. It is incomprehensible to him why in some communities there will be an absence of such jealousies, whereas in others dissension is rife. This is unfortunate because doctors critical of each other weaken the medical profession as a whole. He denounces fee-splitting, holding that it is a betrayal of trust; confidence in the doctor should not become a commodity for sale. In regard to surgeons' fees the thesis is that the surgeon never gets proportionately as much as he should as contrasted, for example, with a lawyer. In the first instance life only is in jeopardy, in the second property or liberty. Even if the fee is inadequate, and only the incompetent surgeon is overpaid, he still feels that he would rather collect a small fee given with genuine gratitude than garner a large honorarium submitted with ill grace.

The closing chapter is a delightful dissertation on the pleasures of Nature, of the joys of outdoor life. He becomes almost poetical in his description of the lovely home to which he has retired. To Morris in Nature, after all, is the epitome of all happiness.

In closing the review of this fascinating book a few excerpts and quotations might well demonstrate how Morris looks on life:

"The matter of selection of a competent or incompetent doctor is by no means confined to any one class of people."

"Any sort of doctor can treat a case if he only has the right diagnosis."

"The patient who goes to a specialist on his own responsibility without first obtaining advice from the family physician is jumping out of the frying pan into the fire."

"A diet should not be prescribed for anybody except by the physician who has made a careful study of the case."

"Slang and idiom are the spark plugs of conversation the world over."

"Freud, the sex dowser who looks for sexual repression because he can find it in nearly everybody—a pretty safe bet."

"The sexual instinct has been taken in charge by sociology and placed in a cage that was constructed by Theology."

"I have always felt grateful when any one jumped on my toes because it forced me to think."

"I have attended local, state, national and international medical meetings . . . even when serious interference with my practice resulted."

"The practice of medicine is a game . . . and must be played according to rules."

"The ideals of medicine are the ideals of intellect, character and service."

J. H. MUSSER, M. D.

#### PUBLICATIONS RECEIVED

P. Blakiston's Son & Co., Philadelphia: Recent Advances in Cardiology, by T. East, M. A., D. M., F. R. C. P. and C. Bain, M. C., D. M., F. R. C. P.

American Pharmaceutical Association, Washington, D. C.: The National Formulary, Sixth Edition 1936, Prepared by the Committee on National Formulary by Authority of the American Pharmaceutical Association.

National Medical Book Company, Inc., New York: Commoner Diseases of the Skin, by S. Wm. Fecker, M. S., M. D., edited by M. Fishbein, M. D. Diseases of the Chest, by J. A. Myers, M. D., edited by M. Fishbein. Industrial Medicine, by W. I. Clark, A. B., M. D. and P. Drinker, S. B., Ch. E., edited by M. Fishbein, M. D.

MacMillan Company, New York: Sedgwick's Principles of Sanitary Science and Public Health, by S. C. Prescott, Sc.D. and M. P. Horwood, Ph.D.

Lea & Febiger, Philadelphia: Diseases of the Nervous System, by S. E. Jelliffe, M. D., Ph. D. and W. A. White, M. D. What You Should Know About Heart Disease, by H. E. B. Pardee, M. D. Diabetes Mellitus and Obesity, by Garfield G. Duncan, M. D., C. M. (McG). Gynecological and Obstetrical Tuberculosis, by E. M. Jameson, B. S., M. D. Food and Beverage Analyses, by M. A. Bridges, B. S., M. D., F. A. C. P.

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## THE PATHOLOGIST'S PART IN MALIGNANT DISEASE FROM THE SURGEON'S POINT OF VIEW\*

URBAN MAES, M. D.†  
NEW ORLEANS

In one sense there is nothing new left to say about the relationship between pathologist and surgeon, for both parties to the contract, at least in their thinking moments, are perfectly aware of what that relationship should be. Ideally, they are consultants with a common aim, the safety of the patients. Practically, they sometimes seem to be adversaries engaged in a battle of wits, a game of mental gymnastics, with their own pride of place the stake rather than the patient's welfare, while at other times they seek to lay the responsibility of diagnosis upon each other and decline to share the consequences. Personally, I have no patience with either point of view. For my own part, I know that the best interests of the patient demand that I support my own opinion with the opinion of the pathologist, but I consider it both my right and my duty to decide for myself, after the proper consultation with him, what use I shall make of that opinion and how much I shall let it influence me in my future course. In short, I am of those who do not believe that a surgeon should act or should stay his hand simply because a pathologist tells him to operate or advises him not to.

That does not mean, however, that I make light of the part the pathologist plays in malignant disease. Indeed, in these days when we are

seeing patients earlier, though still far too late, I think we need his assistance as we never did before. In the advanced case of cancer the pathologist's part is purely academic and perfunctory. In many early cases, too, the surgeon needs the pathologist merely to confirm his own opinion. But in other cases, and the number of them is happily increasing, the diagnosis is not clear, and the first essential of treatment is to make the distinction between benign and malignant disease.

Such a distinction is necessary if for no other reason than that the surgery of malignancy is often almost as lethal as the disease itself, and it cannot be lightly undertaken, on the chance that it may be needed. The fundamental principle of this sort of surgery is destructive, and it introduces a risk that is without warrant or justification unless its necessity can be proven. That justification, to paraphrase Huxley, comes not by faith but by microscopic verification, and it can be supplied only by the pathologist.

Biopsy, however, by which such verification is secured, is not always a wise procedure. There is never a necessity for it when, as in external tumors or circumscribed breast masses, complete excision of the suspected area can be done, with later study of the specimen. It is rarely wise in suspected gastric malignancy, in which, however, exploration is the only safe course; if the decision cannot be made on the gross appearance of the lesion and its careful inspection by an experienced surgeon, gastrectomy is usually warranted. In bone tumors, as Ewing points out, the clinical and radiologic picture usually furnishes a better conception of the diagnostic and therapeutic problem than does biopsy which destroys the

\*Read before the Louisiana State Medical Society, New Orleans, April 30-May 1, 1935.

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integrity of the capsule, thus permitting dissemination of the malignant disease, and introduces also the risk of infection and uncontrollable hemorrhage. The same author also makes the point that while some reported cures in the Registry of Bone Sarcoma have followed diagnosis by biopsy, it would be illuminating to have the other side of the picture and to know in how many cases biopsy hastened the fatal outcome.

There can be no question, however, in spite of the cases in which biopsy should not be done, that it is usually warranted and that it should not be omitted whenever it is practical or safe. But there is, of course, a right and a wrong way to do it. It would seem unnecessary to emphasize that it should be done under aseptic precautions did not one so often see those precautions violated. Theoretically the cautery is safer than the knife, actually in a specimen secured in this fashion the histologic picture is likely to be distorted, and the ordinary surgical excision is perfectly safe if the tissues are handled gently and if the wound is sealed by thermal or chemical cauterization. The aspiration biopsy first advocated at the Memorial Hospital in New York for bone tumors has now been extended to other conditions such as cervical adenopathy, lung tumors, and certain breast and abdominal tumors. While I am inclined to question the wisdom of its use for abdominal diagnosis, I heartily subscribe to its value in the other conditions listed, though it should be remembered, as Ewing and his associates point out, that this method always forces the pathologist to revise his diagnostic criteria.

Biopsy is a diagnostic aid of incalculable value, but it is not the first step in diagnosis, and the surgeon must not permit it to take the place of his own clinical observation. For that matter, I am far from sure that the development of such new instruments as those of the so-called endoscopic type have contributed a great deal to the diagnosis of malignant disease. I am rather inclined to agree with Bland Sutton, who said that their use required the instinct of a sword swallower—I presume he referred here to the patient's part in the procedure—and the eye of a hawk. Certainly the

specimens secured with them must be studied with reservations, and I should be inclined to look with grave misgivings upon a negative diagnosis in any case in which the clinical study indicated malignancy.

Hertzler, with whom I am usually in complete agreement, says that for the experienced surgeon frozen section is a routine offering on the altar of convention, but he forgets that he is a surgeon who came up through the laboratory, and that most of us have not been so fortunate. The value of this diagnostic method has been proved too many times and in too many conditions for us lightly to cast it aside, and I cannot concur altogether in the opinion of those who would discard it as either unnecessary or inaccurate.

The pathologist ought to come into the case long before the specimen is handed to him. I have never been able to see the point of concealing from him the clinical facts in the history of any patient concerning whom I am seeking his advice. Such matters as age, race, sex, duration of illness and previous treatment, particularly previous irradiation, may modify his judgment profoundly and should modify it, for all of them are factors and important factors in the malignant process. I think, too, that he ought to be given the opportunity, whether or not he seeks it himself, of examining the patient and observing the lesion *in situ* before any surgery is undertaken upon it.

We are prone, those of us associated with large urban hospitals, to scoff at what we are pleased to term "mail-order" pathology, but I am not so sure that we have the right to be amused, at least while we tolerate in those institutions what Wolbach properly calls "long-distance" pathology. The pathologist belongs in the operating room, or immediately adjacent to it, not at a desk in a laboratory several floors away. The call of the surgeon constitutes the pathologist's emergency, but I have many times been forced to act without his aid because, for purely physical reasons of time and space, my call went so long unheeded. Gross pathology has come to mean merely the examination of the excised specimen, before it is sectioned and stained. Actually it should mean the examination of the disease process in its natural habitat,



with blood and lymph coursing through it, at which time its appearance differs very markedly from its appearance out of that environment. The pathologist surely should have the right to see *in vivo* the material he must later study under the microscope, and he should have something to say, too, about the selection of the material to be examined, and even about the best method of securing it, if the surgeon's methods seem inadequate.

One point I think should be specially stressed in this connection, the pathologist's responsibility for the technic in his department. That he should have adequate equipment and skilful technical assistance goes without saying, but the supervision of the department in its technical details should still be his personal care. I remember at least one patient of my own who lost her life because the pathologist left too much to his technician, and the technician failed to include in her sections an unsuspected but perfectly obvious area of malignancy which was discovered only when the later clinical course proved the first diagnosis to be wrong. The pathologist has the right to insist upon a proper specimen for examination, but the surgeon, in his turn, has a right to insist upon its comprehensive examination.

The surgeon, for his part, must understand very clearly what the pathologist can and cannot do. He must understand that all pathologists are not equally expert, if for no other reason than that the opportunities for training experts are very limited. He must remember that even the best of pathologists is sometimes wrong, if for no other reason than that he is a human being and that in human beings the percentage of probable error is always higher than is realized. He must remember, too, that cancer presents no standard picture and that its microscopic diagnosis cannot be based upon a set of rules. Only the inexperienced operator thinks that he can put a nickel, or less, in the pathologic slot and emerge with a diagnosis which he can accept without question. The most important thing for the surgeon to realize is that what he is receiving from the pathologist is not an established fact but a mere opinion, based on more or less expert knowledge, based on more or less wide experience, but still nothing

more than an opinion. The pathologist has the advantage of the surgeon in that he sees more cancer, for all varieties pass under his microscope or come finally to his autopsy table. He is not omniscient, but he is safe providing that he knows when to say he does not know, and he would do well to realize that an occasional confession of ignorance really raises him in the surgeon's estimation, for it convinces him that he is dealing with an honest man.

Since Broders' first publication on the subject, the grading of malignancy has become more and more important, though its value from the practical standpoint is still far from clear. For my own part, I am not yet willing to base my therapy upon such a tenuous and inaccurate basis, nor am I willing, except in the most general sense, to base my prognosis upon it. The malignancy index is of value chiefly in demonstrating the general tendencies of a particular type of growth; it tells practically nothing concerning what is going to happen to the patient you are dealing with at the moment. MacCarty lists fifteen possible factors which influence prognosis, only four of which have to do with cellular structure, and that, I think, is as it should be. Certainly no cellular study can possibly be as important from the standpoint of prognosis as is the duration of the disease when the patient is first seen. Even the surgeons who look with most favor upon the grading of carcinoma reduce the matter, consciously or unconsciously, to a clinical basis. Thus Rankin, while making the point that in few other types of malignancy is the histologic yardstick of such prognostic value as in carcinoma of the intestine and rectum, immediately invalidates his thesis by demanding to know also the degree of glandular invasion.

The pathologist, in short, is a surgical consultant and not a miracle man. In that role he plays an exceedingly important part, for medicine, as someone has well said, is not solitaire. "Art uses one eye, science the other, but wisdom uses both," and it is a wise surgeon who adds the pathologist's science to his own art. Wolbach, in an excellent paper on this subject, says that the surgeon needs to be educated

in pathologists as well as in pathology, needs to learn that the mere cutting and staining of a section does not develop a microscopic image requiring only the microscope to read. An intensifier is needed, he says, composed of clinical knowledge, pathologic ability, and plain common sense. And he concludes that the more a surgeon knows about pathology, the less does he need a pathologist and the more often and the more intelligently will he use one. In other words, the surgeon, if you will tolerate the mixed metaphor, while standing upon his own clinical feet, will desire, for his own peace of mind and for his patient's safety, that his hands shall always be held up by a pathologist upon whom he can rely.

#### DISCUSSION

Dr. A. A. Herold (Shreveport): I think the Section ought to be grateful to a surgeon of Dr. Maes' calibre for bringing us such a timely paper. So many do not appreciate the point brought out. I recently heard a radiologist say when a pathologist asked for further information in regard to a case, "Why do you need all that? When we do our work, we don't need all that." When I explained to him why we needed it, he was amazed.

In regard to what Dr. Maes mentioned about traumatizing malignant tissue, when a surgeon goes in and gets a section for biopsy, he jeopardizes the patient greatly. I have seen cases of malignancy of the stomach subjected to exploratory laparotomy and in a few weeks the patient comes to autopsy and the change is remarkable in such a short time as the result of trauma. If we go in and take a section for biopsy the danger of metastasis is greatly increased.

I do a certain amount of pathology at home, and doing that I realize Dr. Maes' suggestion that the tumor should be thoroughly studied. I had a local case a few years ago, a prominent lady who had a tumor from which the surgeon removed a section and sent to me. I found small round sarcoma cells in the tumor, but was not satisfied and submitted it to a man more experienced than I. He did not find these cells and called it a granuloma. Later, we submitted the specimen to a prominent pathologist in New Orleans who confirmed my diagnosis. Subsequently, the growth got so large that all pathologists agreed it was round cell sarcoma.

The pathologist should not examine one section but every section before he gives his opinion. He should have a clinical opinion and know some-

thing about the patient before he passes on the tissue.

Dr. Foster M. Johns (New Orleans): It is delightful to hear a surgeon come to the rescue of the pathologists. The condition he complains of was certainly brought about through the pathologist's own fault, through his own inactivity in the past and the present trend of modern medical practice.

Naturally, a question like this involves two different groups of the medical profession. Dr. Maes gave the surgeon's side and also sympathized to some extent with the pathologist's position.

The non-observance of consultation status of the pathologist in surgical hospitals goes back possibly twenty years or so ago—when pathology first became established as a specialty. Then it was that the pathologist sold his birthright for a mess of pottage to the hospitals in order to find employment. In many instances today the pathologist is considered as mere "hired help" of the hospital; and as such he would not be expected ordinarily to study a case on an even footing with the surgeon. Certainly he cannot get paid to do so on the fixed fee basis for laboratory services. It is impossible for the pathologist to give his best opinion unless he is "in on the case" to the full extent of a duly qualified consultation and that is to be the final solution of the problem.

Dr. Urban Maes (Concluding): The whole point of my paper was a plea for a closer liaison between the surgeon and the pathologist. As Dr. Johns has pointed out, the pathology department serves purely as a consultation department, and since this is so, it is wrong to ask the pathologist to serve as a consultant without letting him in on all the facts of the case. In malignancy these facts are particularly important, and yet we are discouraged in our use of the pathologist and the facilities of his department by the physical difficulties thrown in our way. There is no reason why his office and laboratory should not be in close proximity to the operating room. There is no reason why a surgeon should have to send a block or two away to have a pathologist look at a piece of tissue or a patient. If he were closer, he could look at the patient before the tissue were removed, and then look at the tissue, and I am quite sure he would give a more competent opinion than he does now, when usually the tissue is all he sees.

Our attitude today is that the diagnosis of early malignancy cannot be made without the cooperation of the pathologist. That makes him a consultant of equal rank, and entitles him to a look at the living patient as well as the excised specimen.

## THE CONSTITUTIONAL BASIS OF TRACHOMA\*

HANS SCHROEDER, M. D.  
NEW ORLEANS

"The death rate has been cut in half; the most encouraging feature of modern sanitation. To what is this to be attributed? 1. The improved social condition of the people, better housing, better food, better habits. 2. The education of the people, which has made great strides, and a larger proportion are striving to lead hygienic lives. There is less drunkenness, less overcrowding, better air and better food. 3. Segregation has done much to protect the healthy from the sick. 4. The cases are seen earlier and the condition is recognized before it is hopeless."

Time here does not permit a comparison between infection and the parable of the sower.

• "What makes a good soil? Fortunately the human body is not a very good culture medium for the tubercle bacillus. The adult human individual in normal health seems to be practically immune to natural infection. A large proportion of all individuals become infected before reaching adult life and never have the disease. The studies of Naegli, Burkhardt, and others show that in fully 90 per cent of the bodies of city dwellers who have died of disease other than tuberculosis small tuberculous lesions are present. Franz has shown that over 60 per cent of healthy young adults react to the subcutaneous tuberculin test. Using more delicate tuberculin tests it is found that nearly all adults react, and according to Hamburger, who has employed the subcutaneous-local reaction, over 90 per cent of children are infected before reaching the twelfth year of life. This means, of course, that in a very small proportion of those upon whom the seed falls is the soil suitable for active growth—only a natural immunity keeps the race alive."

"What this suitable soil is has been the

subject of much discussion. From the time of Hippocrates the profession has recognized a tuberculous habitus, which has been variously described as disposition, diathesis, dyscrasia, temperament, constitution, or by the German word 'Anlage'. The terms are not always regarded as interchangeable, but here for practical purposes Ribbert's definition suffices, that a disposition is 'that peculiarity in the organism which allows of the effective working of the exciting causes of a disease'. Manifestly, such a disposition or constitution of the body may be inherited or acquired. The studies of Pearson indicate the very great importance of heredity in the phthisical soil. He concludes that 'the diathesis of pulmonary tuberculosis is certainly inherited, and the intensity of the inheritance is sensibly the same as that of any normal physical character yet investigated in man. Infection probably plays a necessary part, but in the artisan classes of the urban population of England it is doubtful if their members escape the risks of infection, except by the absence of diathesis—i. e., the inheritance of what amounts to a counter-disposition'."

"Acquired disposition means any circumstances which lower the resistance of the body forces. Dwellers in cities in the dark, close alleys, and tenement houses, workers in cellars and ill-ventilated rooms, persons addicted to drink, are much more prone to the disease. The influence of environment was never better demonstrated than in the well-known experiment of Trudeau, who found that rabbits inoculated with tuberculosis if confined in a dark, damp place, without sunlight and fresh air, rapidly succumbed, while others treated in the same way, but allowed to run wild, either recovered or showed very slight lesions. The occupants of prisons, asylums, and poor houses, too often, indeed, in barracks and large workshops, are in the position of Trudeau's rabbits in the cellar and under the conditions most favorable to foster the development of the bacilli which may have lodged in their tissues."

"Occupation has an influence, in so far as

\*Read before the Louisiana State Medical Society, New Orleans, April 29-May 1, 1935.



insanitary surroundings, exposure to dust, close confinement, long, irregular hours, and low rates of wages, favor the prevalence of the disease. Certain local conditions influence the soil very greatly. Catarrh of the respiratory passages appears to lower the resistance and favor the conditions which enable the bacilli to enter the system, or to grow in the tissues. The specific fevers, particularly measles and whooping-cough, predispose to tuberculosis; and any lowering disease may do so, but in such cases it is very often not a fresh infection, but the blazing of a smouldering fire."

"Trauma may be followed by local tuberculosis. The injured part for a time is a locus minoris resistentiae, and the bacilli already present grow in the favorable conditions caused by the injury."

These quotations are from Osler's text of 1912<sup>1</sup>. Substitute morbidity for mortality, and trachoma for tuberculosis, and you have an excellent description of the predisposing causes of trachoma. The scrofulous diathesis is championed by the Italian school of Angelucci, and was also considered by Vossius<sup>2</sup> forty years ago. The associated nose and throat diseases are also mentioned by von Liebermann<sup>3</sup>. Associated hypertrophy of the tonsils is noted by Pascheff<sup>4</sup>. Bardanzellu's<sup>5</sup> finding of 70 per cent of the trachoma cases to give a positive reaction for tuberculosis seems to be of no significance.

Tissue changes show that in tuberculosis, and in granuloma in general, the sclerosing processes organize from the periphery to the center; the same takes place in trachoma. Vessels are few and mostly peripheral. This accounts for the chronicity of the disease. The most frequent termination in trachoma, contrary to tuberculosis, is the process of sclerosis. In the anatomico-pathological system the trachoma granule occupies an intermediate position between the follicle of follicular conjunctivitis, which is a simple evolutionary aberration, and that of the tuberculosis granuloma.<sup>6</sup>

While trachoma in Europe occurs mainly in the lowlands<sup>2</sup>, in the United States<sup>7</sup> and

Canada<sup>8</sup> it occurs only in the higher regions; in fact, in British Columbia it is found principally in the mountainous regions, but is either mild in its course or practically absent in the Coastal regions. Vossius, referring to East Prussia, stated that trachoma is found in persons between 10 and 40 years of age; seldom seen before six and in old age. Among the Indians the disease begins in infancy. The course of the disease in children, however, is milder<sup>9</sup>.

Assalini<sup>9</sup> wrote in 1798 that "the inflammation of the conjunctiva in the ophthalmia of Egypt, and that of the membrane of the urethra afford discharges of which the appearance is exactly similar." Similarity of structural changes in conjunctiva in trachoma and gonorrhea are shown by Fuchs<sup>10</sup> (Fig. 46). Cellular infiltration around the blood vessels (Fig. 45, g) would indicate involvement of the blood vessels locally, as in gonorrhea. The deep furrows (Fig. 45, t) show the obstinacy of this disease toward local treatment. Trachoma also shows some structural similarity to syphilis of the conjunctiva.

Other similarities in trachoma we find to pellagra, for it appears endemically among the poorer classes, and to scurvy which also affects the mucous membrane, but of the oral cavity; also to eczema papillomatousum by its infiltration and chronicity<sup>11</sup>.

The greater prevalence of trachoma among the poor was observed by McGrigor<sup>9</sup> during the Egyptian campaigns of 1798-1807, where he noted that in the 88th British regiment less than 40 men escaped an attack, while only two officers out of 30 had the disease. Hirschberg<sup>2</sup>, some 40 years ago, found in the province of Posen 31-80 per cent of all school children affected with trachoma, while in the better city schools it was only 25-36 per cent.

Great hopes were placed on the finding of a definite organism in trachoma<sup>12</sup> and a plan of treatment based on this. The similarity of the predisposing causes in this disease and that of tuberculosis makes me feel rather pessimistic in this respect. Koch discovered the tubercle bacillus in 1882, yet this discovery has had no direct effect on the treat-

ment of tuberculosis. Noguchi's bacillus granulosis in trachoma does not even show such a laboratory success. Thygeson<sup>13</sup> could not definitely isolate the organism in 16 cases of Egyptian trachoma, which is the same disease as that found in this country. In five of these cases he recovered a similar Gram-organism, but cultural characteristics were not identical.\* The disease runs such a mild course that the patient is often not aware of having it till pannus develops. Occasional cases of spontaneous cure have been reported. It has been suggested that we are dealing with a mixed infection, or with secondary invaders.

Although there is some difference of opinion regarding the diagnosis, the presence of granules or follicles for a positive diagnosis is generally agreed upon. Birch-Hirschfeld<sup>14</sup> is not convinced that light and severe cases are due to the same infecting organism. He says that several examinations are necessary to make a positive diagnosis. Trachoma is also often in the supposedly "good" eye when examined with the slit lamp<sup>15</sup>.

Edmonston<sup>9</sup> was the first to state that trachoma is contagious. Birch-Hirschfeld discounts this and had himself inoculated several times to prove that it is not contagious. Lindner<sup>13a</sup> did the same and produced folliculosis. Vossius<sup>2</sup> said that it is infective, but not contagious.

The inclusion bodies have received considerable attention. Axenfeld found them in 52 per cent of early, "fresh", or untreated cases. Howard found them in 65 per cent of cases among the Chinese. Weiss<sup>16</sup> says that these bodies are found in greater number in blenorrhea of the new-born than in trachoma. Similar epithelial cell inclusions have been found in the male and the female genital canals, so that Assalini's observation, mentioned earlier, seems to have some significance.

Morelli<sup>17</sup> lays great stress on digestive disturbances in the etiology of trachoma in

infants, while Wall<sup>8</sup> considers diet not to be involved in the etiology and believes such a concept pernicious. Experiments by Rice<sup>18</sup> seem to show that vitamins are not involved in trachoma, but we must bear in mind Howard's<sup>15</sup> warning that the term "inactive" is certainly the proper one to use rather than the word "cured" in cases of trachoma. Cohen, and Wilson, say that trachoma is practically an incurable disease; and Davis declares that "a quick cure of a conjunctival condition diagnosed and treated as trachoma is almost a guarantee of a mistaken diagnosis." v. Jilek<sup>12</sup> concludes that there is no pre-trachoma, but that this is nothing but the well-known exudative diathesis, while Falta<sup>19</sup> gives signs and symptoms before the granules appear.

In trachoma as a parasitic agent, we are dealing with a weak obligatory agent contagious only by direct contact<sup>20</sup>. With the material taken from fresh cases it invariably produced the disease in the normal eye of trachoma cases, as in the normal control cases. Material taken from chronic cases generally did not produce the disease<sup>15</sup>.

True trachoma begins in the most vascularized region of the conjunctiva<sup>4</sup>, and experiments on animals are therefore doomed to failure<sup>21</sup>, for they have poorly-developed lymphoid tissue<sup>16</sup>.

Howard<sup>15</sup> claims that full-blooded Negroes are immune, or practically so, to trachoma. Blood transfused from these Negroes has given negative results. He thinks that pigmentation is probably responsible for this immunity, since trachoma is most severe in its course in light-skinned races. Contrary to this, Mackenzie<sup>10</sup> relates the epidemic which raged on the French slave ship "Rondeur" in 1819. The disease occurred during the voyage, and appeared first among the 160 Negroes crowded together in the hold.

Blood changes show 1. a light to moderate anemia<sup>22</sup>, 2. a lymphocytosis<sup>4</sup> which increases with treatment and persists afterwards<sup>23</sup> (I presume this treatment is local), and 3. an eosinophilia<sup>4</sup>, <sup>22</sup>, <sup>23</sup>. Lusza thinks that the eosinophilia is due to intestinal parasites pre-

\*Rieger<sup>13a</sup> says Noguchi's organism produces folliculosis and not trachoma.

sent. Towbin<sup>24</sup> finds the local catalase index lower than the general index in trachoma.

Piquero<sup>20</sup> considers refractive errors as a contributing factor in trachoma. I heard this theory advanced 23 years ago, but it probably has no significance.

Pannus is favored by malnutrition, according to Vossius<sup>2</sup> who also states that pannus and relapses are often accompanied by symptoms of scrofula. McHenry<sup>25</sup> thinks that it is due to the pressure of the rough and heavy lids, while von Liebermann<sup>3</sup> probably has irritation in mind when he says that it disappears with healing of the conjunctival condition.

With all the evidence before us as to the constitutional basis of trachoma, the literature is on the whole rather silent on this point. Angelucci<sup>22</sup> believes that trachoma develops only on an adenoid-lymphatic basis. Sgrosso<sup>22</sup> considers trachoma "a chronic evolution in a lymphatic constitution", and Francois<sup>22</sup> concludes that it is not a local disease.

Treatment of trachoma, as found in the literature, refers to it entirely as a local disease. One of the latest is the preparation of a serum from trachoma cases by Esteban<sup>26</sup> which he applied daily under friction to the upper tarsus till bleeding took place. He claims 80 per cent results after 3-4 weeks' treatment.

It is an axiom in medicine that where a great number of remedies are employed in a disease it is proof of its incurability. Trachoma reminds me of dandruff in this respect. Some therapeutic agents employed in trachoma include:

Medical: Abrin, acetic acid, alum, atropin, autovaccine, benzyl cinnamic ester (Jacobson's solution), bismuth, bismuth iodsubgallate, blood serum, boric acid, calcium levulosephosphate, carbon dioxide snow, chaulmoogra oil, colloid copper, copper ammonio-sulphate, copper citrate, copper sulphate, copper thiosulphate, Dakin's solution, gonococcal antivirius, tincture of iodine, jequiritol, jequiritol serum, mercuric

chloride, mercuric cyanide, mercuric iodide, mercurochrome, potassium permanganate, quinine and urea hydrochloride, silver nitrate, silver proteinat mild and strong, sodium carbonate, sodium chloride, tannic acid, tannin glycerole, tracholysin, trachosan, tricoire, tuberculin, and zinc sulphate. To these have lately been added: attention to general health, tonics, elimination.

Surgical: Brossage, grattage, massage, expression, abscission, excission, scraping, scarification, transplantation, peritomy, peridec-tomy, radium, roentgen ray, cautery, diathermy, ultra-violet rays, and blood transfusion.

Such an array is enough to bewilder and confuse almost anyone. My conviction of a constitutional basis for trachoma is based on the anatomical changes stated earlier in this paper, and on the statement of Peters<sup>27</sup> that he obtained as good results from scraping of the conjunctiva with a blunt knife as he did with more radical procedures.

Finally, Schmidbauer<sup>28</sup> says that if you do not treat the eye for a week or two, it will look better than during the whole course of treatment. The treatment up to the present has been to destroy the lymphatic tissue and replace it by scar tissue, a procedure that is perhaps not found in other branches of medicine, for the general surgeon tries to avoid scar tissue formation as much as possible.

Want of time does not permit me to go into the treatment further at this time.

In conclusion I wish to call your attention to the distribution of trachoma: 1. In Europe, as well as in Kentucky and Missouri, the disease is restricted to the poorer classes. 2. In Arizona and New Mexico the disease is endemic among the Indians, but absent from the white population. 3. In Egypt there is an exacerbation during the summer months, which is considered due to the heat and dust, but can be explained on a nutritional basis as well. 4. A recent report from Amsterdam<sup>29</sup> gives the incidence of trachomatous disease in the elementary public schools, based on figures of 1928, as 10.1 per cent among the Jewish as against 1.0 per cent among the Christian children.



## BIBLIOGRAPHY

1. Osler, William: *The Principles and Practice of Medicine*, Ed. 8, New York & London, D. Appleton & Co., 1912.
2. Vossius, Adolf: *Lehrbuch der Augenheilkunde*, Ed. 2, Leipzig & Wien, Franz Deuticke, 1892.
3. von Liebermann, L.: *Leitsätze zur Trachombehandlung*, Klin. Monatsbl. f. Augenh., 79:531, 1927.
4. Pascheff, C.: *Les récurrences du vrai trachome et les lois du trachome*, Arch. di ottal. 40:455, 1933.
5. Bardanzellu, T.; and Trovati, E.: *Sui rapporti clinici fra tracoma e tubercolosi*, Arch. di ottal. 38:621, 1931.
6. de Rosa, Giuseppe: *L'evoluzione cicatriziale del granulo tracomatoso e del granuloma tuberculare*, Arch. di ottal. 34:280, 1927.
7. Warner, H. J.: *Notes on the results of trachoma work by the Indian Service in Arizona and New Mexico*, Pub. Health Rep. 44:2913, 1929.
8. Wall, J. J.: *Trachoma in the Indians of Western Canada*, Brit. J. Ophth. 18:524, 1934.
9. Meyerhof, Max: *A short history of ophthalmia during the Egyptian campaigns of 1798-1807*, Brit. J. Ophth. 16:129, 1932.
10. Fuchs, Ernst: *Lehrbuch der Augenheilkunde*, Ed. 15, Leipzig & Wien, Franz Deuticke, 1926.
11. Schamberg, Jay Frank: *A Compend of Diseases of the Skin*, Ed. 7, Philadelphia, P. Blakiston's Son & Co., 1925.
12. v. Jilek, Josef; and Kristies, Elisabeth: *Trachoma und exsudative Diathese*, Klin. Monatsbl. f. Augenh. 81:487, 1928.
13. Thygeson, Phillips: *Bacterial flora in Egyptian Trachoma*, Am. J. Ophth. 12:1104, 1931.
- 13a. Rieger, Hertwigh: *Zur Aetiologie der folliculosis conjunctivae*, Arch. f. Ophth. 128:312, 1932.
14. Birch-Hirschfeld: *Neuere Anschauungen ueber Trachom*, Zeitschr. f. Augenh. 65:209, 1928.
15. Howard, A. J.: *Results of recent investigations in etiology of trachoma*, Am. J. Ophth. 16:218, 1933.
16. Weiss, Charles: *Our present knowledge of the etiology of trachoma*, J. Missouri M. A. 27:125, 1930.
17. Morelli, Enrico: *Sull 'influenza dell' alimentazione nelle malattie oculari dell'infanzia (cheratoconjuntivite e tracoma)*, Arch. di ottal. 34:273, 1927.
18. Rice, E. C.; and associates: *The effects of diet and vitamins on trachoma*, Am. J. Ophth. 17:735, 1934.
19. Falta, Marcell: *Zur Fruehdiagnose des Trachom*, Klin. Monatsbl. f. Augenh. 88:520, 1932.
20. Piquero, Pedro: *Tracoma y constitucion*, Arch. de oftal. hispano-am. 32:87, 1932.
21. Kendall, Arthur Isaac; and Gifford, Sanford, Robinson: *Trachoma and avitaminosis*, Arch. Ophth. 4:322, 1930.
22. Francois, J.: *Hematologie du trachome*, Arch. d'opht. 48:549, 1931.
23. Luszka, Andreas: *Das Blutbild bei Trachom*, Klin. Monatsbl. f. Augenh. 91:400, 1933.
24. Towbin, B. C.; and Okunew, D. F.: *Ueber den Index der Blutkatalase beim Trachom*, Arch. f. Ophth. 126:629, 1931.
25. McHenry, D. D.: *Practical points in the treatment of trachoma*, J. A. M. A. 93:1291, 1929.
26. Esteban, Mario: *Ensayos de inmunoterapia local en el trachoma*, Arch. d. oftal. hispano-am. 33:91, 1933.
27. Peters, A.: *Die operativen Eingriffe an der Bindehaut, in Graefe-Saemisch, Augenärztliche Operationslehre*, vol. 1, Ed. 2 & 3, Berlin, Julius Springer, 1922.
28. Schmidbauer, Matthaeus: *Augenheilkunde nach den Gesetzen der physikalisch-diaetischen Therapie*, Ed. 3, Linz a. Donau, R. Pirngruber, 1910.
29. *The crusade against trachoma*, Netherlands letter in J. A. M. A. 104:764, 1935.

## DISCUSSION

Dr. T. J. Dimitry: I compliment any person who will stress in a reasoning process the interdependence of the body's organs in the explanation of a local disease. It is unfortunate that such reasoning is not more frequently indulged in, and particularly if it is put in logical sequence.

The doctor's philosophy is strange in that he has used authority to speak for him and develops his subject from so many sources that it is hard to follow. The actors in his play are in abundance. My opinion, and I dare say all agree, is that there is a constitutional basis in trachoma but he has not established in his contribution any tangible advances over what has been known. Does he cure by the treatment of the constitution, and, if he does, how is it accomplished? And even if he does, it is not established thereby that trachoma is other than a local disease.

I have in my writings repeatedly made known that I do not consider trachoma a conjunctivitis, nor a tuberculosis of the conjunctiva would I call a conjunctivitis, and that the conjunctivitis which is most commonly found in association with trachoma is an infection on a trachoma pathology. The conjunctivitis infection on trachoma and the conjunctives as a whole can be readily improved by treatment, and this accomplished by the excitation of the reticulo-endothelial system, but because such is attained, only proves that the constitution can prevent and overcome disease. This would be equally true for vitamins, diet, etc. Increased bodily resistance can be established for trachoma equally as well as for other diseases.

Great numbers of ophthalmic surgeons, myself one of them, believe that the removal of the fibro-elastic band of the lids, designated anatomically as the tarsus, greatly benefits trachoma, and excellent results are had even though the disease has existed only for a short period. It is because of the results had by the surgical removal of the tarsus that I have searched out by microscopic study the sectioned tarsus. At this time, I have not obtained sufficient information to justify a statement. I have been waiting to hear someone say that the fibro-elastic tarsus should be removed, prophylactically in infancy, so that the disease would not be acquired in those people who live in countries where it is prevalent to the extent of 90 per cent. This statement has not come about as yet, however, the tarsus is being removed in sub-acute trachomatous conjunctivitis.

My treatment for trachoma may be reduced to the following few words—get rid of the conjunctival infection that accompanies the trachoma. This is to be had by the use of foreign proteins. At the present time, I am using the Brook's Hemo-protein. These proteins are helpful to both processes. I then either make the tarsus pliable or

I remove the tarsus surgically, and either of these two are performed even though there be no scar tissue in the tarsus.

Those granules shown to you on the screen are made to empty themselves, and in emptying themselves it is like emptying a little abscess or a boil. The lid is treated so it will be made pliable, and soft, not with the idea of scraping it and producing scar tissue. It is a massage, not a grattage. One does not destroy a conjunctival tissue, and the other does definitely destroy it. One produces scar tissue and the other does not. Trachoma is a scar tissue producing disease. If you grate it and scrape it you are producing more scar tissue. However, be mindful of this: The disease is not a conjunctivitis. If it were, you would not extirpate a part for the cure of the whole. It is not logical to think that anyone would believe that trachoma is a disease in which you can remove a part of a conjunctiva and hope to effect a cure. In fact it is a tarsitis which is fundamentally at the bottom of the disease condition. The conjunctivitis is merely an implant or an infection on the trachomatous base. Someone will say we remove the tarsus because of the distortion, but we really remove it before it becomes a disease in a subacute state or chronic state.

Analogous to the reasoning of the essayist, I willingly say that trachoma has been reduced 75 per cent in the clinics of the City of New Orleans in the last five years, and this is had even though no treatment has been given. At the Charity Hospital we had plenty of trachoma a few years ago, and today literally none. In the Philadelphia clinics and others they got well, not because the doctors treated them, not because any particular technic was brought into play, but they got well just the same, maybe it was that the food has brought the cure about. Just why such has happened is not accounted for other than during the period of prosperity our people were able to put on a greater resistance to this and other eye diseases. Another disease, namely, scrofulous ophthalmia, has practically disappeared from the clinics.

My understanding of the contention the doctor advances is that trachoma is a social problem, which as a consequence develops the constitutional disease.

He believes the people should have proper food, clothing and housing, and that the masses are to be protected from the villainous industrialists and the slums they establish, and, in this way, build a constitution that will resist such a disease as that of trachoma.

Dr. W. R. Buffington (New Orleans): Volumes have been written about trachoma; yet, all we know about this peculiar symptom complex from

antiquity to the present time could be condensed into twenty single-spaced typewritten pages. Its etiology is just as much in dispute now as it was in the days of Hippocrates.

International medical opinion, however, has admitted these facts: That it is universal; that it thrives best in filth and poverty; that it is more prevalent in some countries than in others; that it entails years of great suffering, ending finally in impaired vision or blindness. History records that trachoma originated in Egypt and Palestine. After these admissions, medical opinion is comparable to the "Confusion of Tongues" in the erection of the Tower of Babel.

It has been well said: "Statistics on trachoma are not reliable because they are too greatly influenced by the personal attitude of the examiner." Four theories can be formulated from the vast literature on the subject:

1. A definite disease—due to a specific, highly contagious—as yet unidentified—germ or virus.
2. A group of symptoms, the basis of which is a racial, familial, or individual constitutional background; that the frequent exacerbations are due to a super-added microbic infection; that the syndrome, called trachoma, is a culmination of these contributing agents.
3. An endogenous constitutional lymphadenoid disease of the conjunctiva, and not an inflammatory lymphatic infiltration. (Pascheff).
4. Diet deficiency.

If trachoma be a contagious disease, the specific agent has not yet been found. The infectivity of the bacillus *granulosis* has been generally discredited. In Egypt, Wilson, inoculated normal human conjunctivae with this bacillus; not a single case developed trachoma. Intracellular inclusion bodies have been thought to be infecting agents, or the result of the specific agents. Wilson was unable to produce human trachoma with inclusion bodies. Besides, they are not peculiar to trachoma; they are found in other conjunctival diseases. Gifford and Lazar demonstrated inclusion bodies in conjunctivitis artificially induced by chemical agents. No one has been able to reproduce trachoma by transplanting trachomatous material directly into the normal human conjunctiva. I believe the inclusion bodies are the visible evidence of epithelial phagocytosis, or else they are the result of nuclear degeneration of damaged epithelial cells. MacCallan, the greatest authority on Egyptian trachoma says: "Until the alleged specific organism is isolated, judgment must be suspended." According to Pascheff: "Trachoma exists, but is not epidemic in Bulgaria." Redslob states that 300,000 Alsations were sent to the eastern

front during the World War; they were billeted in the homes of the Polish and Letish inhabitants, among whom trachoma is common, yet they remained free from infection. A personal opinion expressed by Dr. Wilmer of Johns-Hopkins in a private interview is that the so-called American trachoma is not contagious.

In support of the second theory, authorities agree that trachoma begins in early life in countries where its incidence is high. Gulegonetti finds that at least 45 per cent of infections have begun before the age of 15 years. MacCallan states that in Egypt the disease becomes manifest shortly after birth. These facts offer convincing argument that race, country and environment, play important roles in the prevalence of trachoma. In this country the severe exacerbations often seen are due to such infections as the Morax-Axenfeld and the Koch-Weeks bacilli. In Egypt and the near East a non-venereal gonococcus is often responsible for a severe superimposed infection. These micro-organisms added to an already damaged or diseased conjunctiva often become virulent. Sedan reports a recurrence of true trachoma with corneal complications in three healed cases when eserine was instilled for glaucoma, suggesting the possible effect to persons predisposed. Barnett in 1876, reviewing all facts up to that time, concluded that trachoma was not a local disease due to specific infection but a local manifestation of some dyscrasia. Peters of Germany, and Burleson of Texas believe that it is the sequel to many forms of conjunctival inflammation.

The third theoretical conception that it is an endogenous constitutional lymph-adenoid disease of the conjunctiva, and not an inflammatory lymphatic infiltration, is more or less hypothetical. It is a known fact that the conjunctiva is a lymph-adenoid membrane and that it shows a variable tissue reaction to different diseases and irritants. Pascheff, one of the greatest living authorities on diseases of the conjunctiva, believes that such diseases as vernal catarrh, folliculosis, phlyctenulosis, and trachoma, are tissue reactions to tracheo-bronchial adenopathy or some other constitutional disorder.

My own observations teach me that trachoma is not a specific infection. It is not contagious. As a rule, only one or two members of a large family are affected. This suggests an individual predisposition. My experience, based on the treatment of trachoma, forces the conclusion that a qualitative or quantitative diet deficiency is the greatest single factor in this disease process, and that many exacerbations are due to superimposed infections by such micro-organisms as the Morax-Axenfeld diplo-bacillus. In 1926, the late lamented Dr. Stucky said: "I believe trachoma will be

proven a deficiency disease due to faulty or unbalanced diet." His opinion was based upon a vast experience with trachoma in the mountains of Kentucky. The effective treatment if carried out is—Hospitalize; remove all foci of infection; give them the benefit of fresh air and sunshine and place them on a diet which is rich in vitamins, similar to that given pelegirins. Codliver oil should be given systematically and routinely. Local treatment must not be neglected. It takes six months to one year of intensive treatment, or I might say training, to remake the constitution in order to permanently cure the disease.

Dr. Hans Schroeder: When I made the comparison between the predisposing factors of tuberculosis and trachoma I did not mean to imply that they are the same chemically. I regard pulmonary tuberculosis in its early stages as a nutritional edema of the lungs with an associated constitutional factor deficiency, and the tubercle bacillus as the invader on this prepared soil, to paraphrase Osler.

In trachoma I found an element deficiency in conjunction with a mild deficiency of a certain vitamin. Time did not permit me to go into this for the scientific background involves over 40 references to the literature. I have to reserve it for a separate paper.

Paracelsus said 400 years ago that if there is a disease in the body, all healthy organs must fight against it; not one alone, but all. We have made some progress, e. g. foreign proteins and antitoxins, but we have to apply more of the information of general medicine. The microscopic outlook of the specialist has to be changed to the macroscopic one of the general practitioner.

The inclusion bodies as found in 50 per cent of trachoma cases may or may not have any significance. Ann Kuttner and Shao-Hsun Wang (J. Exper. Med. 60:773, 1934) of Peiping state that inclusion bodies may be due to a filterable virus of low virulence or to other agencies. Six of 13 workers tried to demonstrate the presence of the virus, but only 3 succeeded.

Inclusion bodies were found in the salivary glands of Chinese infants dying from miscellaneous causes. The lesions are similar to those previously described in infants in Europe and America. These lesions could not be reproduced in animals. Inclusion bodies have also been found in the submaxillary glands of hamsters, white mice, and wild rats. In these animals the lesions are produced by a virus which is specific for each species, and which is very similar to the submaxillary gland virus of guinea pigs. Applied to the human it means that if we are dealing with a virus, it is of low virulence and specific for the human race. For this reason the transmission of



the disease to animals has been unsuccessful. This we know.

Hass (Am. J. Path. 11:127, 1935) found inclusion bodies in the parenchymal cells of the liver and adrenals of a premature, two-weeks-old infant. He also assumes a filterable virus.

If we are dealing with a virus of low virulence I feel that by supplying the missing factors in the body, the virus does not have any chance to establish itself. We can then disregard bacterial granulosis and the secondary invaders. When we correct the soil for this disease the invading organisms will have no significance, and the disease which we know as trachoma has no basis for existence.

Dr. Schroeder (Closing): I thank the gentlemen very much for the interest they have taken in this subject.

Dr. Dimitry complains that I quote so many authorities. I have to quote authorities till I am considered one myself. He said my paper made no advances; the advances come in my next paper entitled: The Constitutional Treatment of Trachoma. I could not possibly give it all in one paper.

The doctor speaks of the villainous industrialist; he used to be villainous, but he found out that a healthy and contented worker turns out more work; that's why we have industrial medicine and industrial surgery today.

As to the removal of the tarsus, that, to my mind, resolves itself into the treatment of McHenry, which is to relieve pressure. The severe trauma involved also causes a pronounced hyperemia with tissue reaction, and naturally the hyperemia mobilizes the leukocytes. As a routine procedure I cannot endorse it.

Dr. Buffington was very kind to give you the different theories of trachoma, but you all know those from your student days. I did not come here to tell you about the theories; all I wanted was to draw your attention in one direction, which is fundamental and basic. We have had enough of theories in medicine, we want to get down to business.

## GYNECOLOGICAL ASPECTS OF LOW BACK PAIN\*

JOHN F. DICKS, M. D.  
NEW ORLEANS

This symposium on low back pain was arranged with a view of focusing the attention of the profession upon this most common and annoying symptom, and to show how closely it is related to the various specialties. So important is this cooperation

that some of our leading gynecological clinics have established departments of orthopedics to enable them to make more accurate diagnoses.

A most interesting and instructive treatise might be written about backache in women. Were this symptom studied from every view point, possibly the longest chapter would be written by the gynecologist.

Ward in an analysis of the records of the Woman's Hospital in New York, states, "Our statistics show that approximately eighty-five per cent of our gynecological cases complaining of backache are caused by gynecological pelvic diseases and the remaining fifteen per cent by orthopedic or non-surgical conditions."

Lynch in an analysis of over a thousand cases found that forty nine per cent had sacral or lumbar backache, of which 76.5 per cent were due to a gynecological condition, seven per cent were of doubtful etiology and 16.5 per cent were definitely orthopedic.

For my own satisfaction I undertook a study of one hundred cases that had definite gynecological pathology and found that sixty-eight cases had backache, thirty-two had no backache. A symptom that is present in sixty-eight per cent of cases is certainly worthy of our consideration and closer study.

In the first place it may be stated that backache above the lower lumbar and sacral regions have no direct relationship with pelvic disease, and that though such backaches are sometimes relieved by pelvic operation, the causes of the relief are indirect or incidental. Backache in women since the days of Aristotle has been associated with retro-displacement of the uterus. According to modern conception this cause has been grossly exaggerated.

Graves, in an attempt to solve the problem, studied the histories of five hundred consecutive cases of retro-version and found that seventy-six per cent complained of low backache. He states that there can be no doubt of the fact that retro-displacement does cause backache.

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Ward quoting Jaschke who recently compared a thousand cases of retroflexion with a like number of antelexion and states he found the supposed characteristic symptoms of retroflexion present in both series.

Assuming then from a review of the literature and from our own personal experience that there are many simple displacements that do not cause backache, let us see what types do, and under what conditions it does occur:

- (1) Symptoms do occur when the uterus is displaced, and there is an associated chronic metritis where the uterus is large and there is passive congestion.
- (2) Where the displacement is associated with varicose veins of the broad ligament.
- (3) Where the displacement is fixed due to adhesions.
- (4) Where there are large prolapsed ovaries.
- (5) And most important of all where there is displacement associated with the descensus of the uterus.

Retro-displacements of the uterus must be classified as:

- (1) Congenital.
- (2) Acquired.
- (3) Old.
- (4) Recent.

Congenital displacements rarely give symptoms of backache. By recent displacement we mean those that occur after delivery, and if diagnosed and reduced may be cured without surgery. Therefore, it is of utmost importance to examine obstetrical cases six weeks up to six months after delivery. Subinvolution of the uterus is the chief cause of displacement after delivery, and the chief cause of subinvolution is poor obstetrical care with neglected cervical tears and erosions, and allowing the patient to resume her activities too soon after delivery. I cannot stress too strongly the importance of neglected erosions and infections of the cervix as a potential cause of backache. If an erosion is left untreated a subsequent metritis and para-metritis may develop, a large

boggy uterus results and this is the type that gives trouble. This condition may be avoided by a routine cauterization of the cervix whenever erosions occur.

It is of utmost importance to determine before operation if a given displacement is responsible for backache. If the uterus can be reduced and a pessary introduced and the symptoms relieved, then we may proceed with the operation and feel sure of a good result. From the above analysis it is evident that all displacements do not cause backache. Many a woman might be spared a laparotomy if the surgeon was in doubt by simply strapping the back and waiting for symptoms to subside.

Bullard, from the Clinic of Woman's Hospital of New York, studied seven hundred twenty-one cases of backache. Of these one hundred and twenty-nine were due to retroversion without any other complication. Of these hundred and twenty-nine they were all operated on. The symptoms were relieved in a hundred and three. Twenty-six cases were unrelieved: over twenty per cent failure in a well organized gynecological clinic. Imagine the percentage of failure when this most popular operation is done by the rank and file of the medical profession, the occasional operator, the general practitioner.

To my mind one of the most frequent direct causes of low backache is pelvic congestion. Any pathology within the pelvis producing this condition is the causative factor. Under this heading we must consider:

- (1) Premenstrual congestion.
- (2) Tubo-ovarian inflammation.
- (3) Chronic metritis.
- (4) Para-metritis which is often due to a lacerated infected cervix.

Another great group of gynecological backaches should be classified under the heading, Pressure Causes. These consist of fibroids, ovarian cysts, dermoids, papilocyst adenoma or sarcoma of the ovary. In these growths the pain is due to pressure on the cervical ganglia of the sympathetic nervous system, in the region of the cervix, rectum and utero-sacral ligaments and on the roots of sacral nerves. Pressure symp-

toms are also due to pressure on the rectum and bladder with resulting constipation and gas formation.

A survey of gynecological backache would not be complete without considering that group where symptoms are due to traction on the ligaments and the supports of the pelvic organs, as in descensus of the uterus, in prolapse, cystocele, and rectocele. So important do I consider this group that I read a paper before the State Society on the "Importance of the Utero-Sacral Ligaments in Descensus of the Uterus."

The elements comprising the substenacular apparatus of the uterus may be divided into three parts:

- (1) The upper supporting.
- (2) The mid supporting.
- (3) The lower supporting.

They all play their part in keeping the uterus in it's normal position and the yielding of any one of them causes strain to be thrown on the other, and this strain is a direct cause of backache. All the structures attached to the body of the uterus may be classified as to the upper supporting group. Under this head we have the broad, the round and the ovarian ligament. The mid supporting group consists of the utero-sacrals and the lateral cervico-pelvic or Mackenrodt ligament. The lower supporting group consists of the pelvic floor and fascia.

One interesting clinical observation I have made is that women with a first degree prolapse usually complain of a great deal of low backache. As the prolapse grows more marked and becomes complete the backache usually subsides.

I have avoided personal histories, but have many cases of interest where patients have been treated by competent orthopedists, have been subjected to belts and braces galore; these patients being subsequently relieved by the proper gynecological diagnosis and procedure. In fairness to the orthopedists, neurologists and the urologists, I feel that they have had the same experience only the shoe has been on the other foot.

Stumdorf in a very excellent article says that he thinks gynecological backache is a spastic backache. The gynecological factor being one among many causes of myospastic pain in the lumbo-sacral area.

The myo-spasm is a protective phenomenon like that observed in other muscular areas over deep seated irritation. It protects the inflamed viscera by tilting the pelvis out of the direct line of intra-abdominal pressure. Any structural or functional limitation of the mobility range in the sacro-lumbar joint causes muscle strain manifested by spasticity and backache. In other words gynecological pathology causes a compensatory backache. It is not due to the pathology itself, but as a muscle strain as a result of it.

"The modern trend of advanced clinical procedure subjects every regional manifestation of a disorder to a most searching analysis of it's cause. Chemical and biological aids are used in the tracing of the links from cause to effect and yet how many gynecologists direct a single glance of superficial inspection to the aching back of a patient until it's post-operative persistence impels a closer search for it's cause"?

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## UROLOGICAL ASPECTS OF LOW BACKACHE\*

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NEW ORLEANS

Backache is at times a symptom of a urological condition, but it more frequently denotes some other condition. From the urological aspect we limit the field of backache from the last dorsal vertebra to the tip of the coccyx. This field is again divided into the upper and lower; i.e., backaches which occur in the lumbar portion of the back and those which occur from the first sacral down to the coccyx. Again anatomically we divide backaches into those located over the erector-spinae group of muscles and just lateral to this group, and those which are located over the vertebra. We do this because in the aver-

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age layman's mind any pain or ache in the back is called backache, and in order to obtain a clear idea as to the point of pain, we make the patient state specifically the exact area in which he feels his aching pain.

A question of importance is whether the backache is unilateral or bilateral, or whether it extends across the entire back. If pain is unilateral it leads us to believe there may be some kidney condition as the cause; bilateral backache may be caused by a bilateral kidney condition, while backache across the entire back may be due to some septic absorption from a urological infection.

Low backache felt across the sacrum makes us suspicious of a prostatic condition, whereas a lateral sacral pain rather leads us to believe that there is some sacro-iliac disease present. This is just the opposite of the pain which is seen in the upper lumbar regions. The back pain which is more frequently associated with kidney conditions is felt in the costo-vertebro angle and most particularly over the superior lumbar triangle. The kidney condition which produces this type of pain frequently causes a pain radiating anteriorly below the costal margin into the anterior portion of the abdomen, or radiating anteriorly and downward towards the groin.

Pain in the back may be of several different types. Pain may be felt only upon movement, —flexion or extension of the body in any direction. This type is usually due to some involvement of the vertebral joints or the musculature of the back, such as we see in cases of lumbago or in arthritis, and is never caused by a urological condition.

There is an intermittent type of backache usually felt lateral to the erector-spinal group of muscles in the lumbar region, which is relieved by lying down and aggravated by being in the erect position over any length of time. This more or less dragging type of pain gradually grows worse as the day progresses, and is the kind frequently associated with a movable kidney with some hydronephrosis. When the patient lies down the kidney goes back into place, and there is an emptying of the kidney pelvis and the pain is relieved. This backache may become suddenly very severe and the patient

have a Dietl's crisis, due to a complete blockage of the urinary outpour of the kidney, because of kinking of the ureter.

Stone in the pelvis of the kidney may produce a backache located over the kidney area on either side, which may become aggravated by the erect position and exercise. As a rule a stone in the pelvis of the kidney will sooner or later produce blockage of the ureter at the uretero-pelvic junction, or by passing into the ureter and blocking the ureter itself, thus causing severe kidney colic. A patient may have backache caused by stone for a number of months before a real colic reveals the true nature of his disease. This was true of a case seen recently in which the patient, for several months prior to colic, had a nagging pain in his right lumbar region. It was only the colic that brought him to the doctor, and roentgen ray revealed a stone approximately the size of a fingernail in the kidney pelvis.

Infection of the kidney, as in an early case of pyelitis, may produce a nagging unilateral or bilateral backache before there is any evidence of fever. This may continue for a few days to a week or more before there is a chill and a rise of temperature. We believe this is most probably due to inflammatory processes in the mucosa of the pelvis and ureter, producing enough occlusion of drainage to cause pelvis tension and pain. When further occlusion takes place it is then that the pain becomes more marked and chills and fever take place. In pyelonephritis there is a considerable enlargement of the kidney substance with capsular tension which also produces pain, continuing even after the kidney drainage is reestablished and temperature has subsided.

In cases of tumor of the kidney where the mass of the kidney has been greatly increased, such as in hypernephroma, there is considerable weight exerted upon the kidney attachments, which produces a dragging sensation felt over the kidney region. This is also true in cases of hydronephrosis, which come on gradually over a period of time, the weight being caused by the large amount of urine retained within the kidney pelvis.

It is difficult to determine the exact cause of sacral backaches, as this type of pain is very

common and there are a number of conditions which can produce sacral pain. Of course, in the female, the pelvic organs are very often at fault. In the male the prostate gland is often the cause of this condition and can be ruled out only by treatment of the gland. The size, the shape, the consistency of the gland as determined by digital palpation, or even examination of the prostatic secretion will not tell whether or not the gland is causing the pain. However, four or five masages of the gland will give a marked improvement or even total relief, if the pain is produced by the prostate. For this reason it is our belief that this type of backache is a reflex pain, and not a true septic condition. However, in marked cases of acute prostatitis we see a generalized backache, and again we see large subacute inflammatory conditions of the prostate without any backache being present. We also see large hypertrophies of the prostate with no pain, and carcinoma of the prostate where the gland is huge, without backache. We have noticed in a large number of cases complaining of sacral backache, the complete relief which has followed even one or two massages of the gland. A case which illustrates this point was seen only recently. The patient stated that he had had a very bad sacral backache for a period of several months, and had tried all the usual remedies,—strapping, etc., even a chiropractor. His gland when examined was only moderate in size, slightly lumpy and irregular, and the prostatic secretion showed moderate pus. Within two hours after the massage he stated that the backache was much relieved, and after the second massage three days later his backache disappeared and has not returned.

When there is backache located anywhere in the lumbar spine, in the sacrum, or in the sacroiliac region in an elderly man, examination of the prostate gland should always be made, as there is a possibility of cancer of the prostate gland being present with metastases to the bony structures near about.

Every case of backache should be thoroughly examined to determine the cause of the pain. This examination can be complete only when there has been a thorough urological investigation made to prove or disprove the genito-uri-

nary organs as causative factors. If roentgenograms are to be made of the lumbo-sacral vertebra, the patient should be prepared so that the picture may show the kidneys, ureters, and bladder. For the physician to exclude the genito-urinary system it is necessary that the prostate be palpated and the secretion examined microscopically; that the kidneys be palpated and any enlargement or sensitiveness in the kidney region noted; that the freshly voided urine be examined for albumin, casts, pus, blood and bacteria. If albumin is found in the urine this means that there is some irritative process going on in the kidney. If associated with casts and nothing else, it means an irritative nephritis due to a focus elsewhere in the body. If blood is present in the urine it may be due to a nephritis, but in the greater percent of the cases it is due to stone, hydronephrosis, tumor, infection, tuberculosis, or any of a large number of other urological conditions. If pus and bacteria are associated with the blood, it means that there is an infective process which may be secondary to one of the preceding conditions. If pus and bacteria are found without blood, albumin or casts, infection may be purely of the lower urinary tract, and again it may be due to infection of the upper urinary tract. From these facts one can see that it is essential that should these pathological elements be found in the urine, it is necessary to go further with one's examination to determine the organs involved and this can be done only by the methods used in the general urological survey of cases.

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## THE ORTHOPEDIC ASPECTS OF LOW BACK PAIN\*

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NEW ORLEANS

Owing to the multitude of etiological factors involved, low back pain is one of the most difficult while at the same time most interesting conditions that the orthopedic surgeon is called upon to treat. Next to headache it is probably the most common symptom for which the patient

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seeks relief. In a number of cases the pain is symptomatic of some condition not referable to the spine, but in by far the greater number of cases it is attributable to some orthopedic condition.

The various orthopedic affections in which low back pain may be a prominent symptom are as follows:

1. Congenital anomalies.
2. Postural defects.
3. Traumatic affections.
4. Neoplasms.
5. Lesions of the intervertebral discs.

In this classification I have left out spinal cord tumors, for even though the orthopedist frequently sees this condition it strictly belongs to the neurologist.

#### 1. CONGENITAL ANOMALIES

*Spina Bifida Occulta.* This is the condition where there is failure of fusion of the neural arches, leaving an opening posteriorly which is bridged over by a tough connective tissue membrane. It is the most common congenital defect noted, but rarely gives rise to symptoms. This condition should be kept in mind when dealing with certain trophic disturbances of the lower extremity, or with congenital deformities of the extremity, or in cases where there is progressive development of contractures as seen in claw foot.

*Sacralization of the fifth lumbar vertebra.* This may be unilateral or bilateral. The transverse process of the fifth lumbar vertebra may be abnormally long and may actually impinge on the ilium or sacrum. In an A-P roentgenogram we may see what looks like impingement, but on taking oblique views this may not be the case. The impingement itself does not cause pain, for frequently the pain is referred to the opposite side. However, it does produce an abnormal leverage action on lateral bending or rotation that predisposes to sprains at the lumbosacral juncture. This is also true of unilateral sacralization of the transverse process of the fifth lumbar vertebra, where there is actual fusion of the process to the sacrum or ilium. In bilateral sacralization, the fifth lumbar vertebra becomes a component part of the sacrum and the lumbosacral junction is shifted one vertebra higher. In this condition

lateral motion and rotation of the spine will be limited.

In unilateral sacralization or in impingement of the fifth lumbar transverse process, it was formerly thought necessary to remove the offending process. This procedure is not done any more, as it has been found that the patient was made worse. The procedure of choice is some type of fusion operation. This is done only in persistent cases of backache where the defect is noted and where relief cannot be obtained by the measures that will be outlined in considering postural defects of the lumbosacral spine.

*Spondylolisthesis.* This is the condition where there is forward displacement of the fifth lumbar vertebra on the first sacral, or, less commonly, displacement of the fourth lumbar on the fifth. It is a condition resulting from failure of fusion of the neural arch with the vertebral body. There is a resulting pseudarthrosis. With the stress and strain of the superincumbent weight there is a gradual separation of the two component parts of the fifth lumbar vertebra and the typical deformity results. Where there is no separation at the laminar defect the condition is spoken of as *spondylolisthesis*.

In a typical case there will be a marked accentuation of the lumbar hollow. On palpating down along the spinous processes we will find that the process of the fifth lumbar vertebra will occupy a deeper position than that of the first sacral. There will be a ridge in the flanks caused by the telescoping of the trunk and motions of the spine will be limited. An individual may have this condition and not experience pain, but with the receipt of trauma such as would produce a lumbosacral strain, symptoms will be induced and may remain permanent. In addition to the low back pain there may be neurological findings referable to the fifth lumbar nerve.

Treatment in these cases consists in the use of a properly fitting lumbosacral belt in the chronic cases. In cases where the symptoms are acute, rest in bed on a Bradford frame is indicated. This is followed by the application of a plaster jacket for a period of six to twelve weeks and then by the use of a belt or light spinal



brace. In cases where these measures do not suffice it will be necessary to do a lumbosacral fusion. If this procedure is done, the third, fourth, and fifth lumbar vertebrae must be fused to the sacrum. The Hibbs' or Albee operation may be done.

*Numerical variations in the lumbar spine.* There may be a greater or less number of lumbar vertebrae than the normal five. With an increase there will be in an increase in the range of motion and a greater predisposition to postural strains. With a diminution there will be some limitation of motion, with a greater liability to the development of acute sprains.

From what has been said about congenital anomalies of the lumbosacral spine, the idea is stressed that the anomaly per se does not cause pain, but it does predispose to the development of strains.

## 2. POSTURAL DEFECTS

In by far the greater majority of cases of low back pain the underlying mechanism is some postural defect. Before going any further with this discussion I would like to review some important points about the anatomy of the lumbosacral region. Here we have two sets of articulations to deal with, the lumbosacral and the sacroiliac. As is the case elsewhere in the spine, the body of the fifth lumbar vertebra articulates with the body of the first sacral by means of the intervertebral disc. However, at this point, the bodies of the fifth lumbar and the first sacral vertebrae form an angle—the lumbosacral angle—which is of variable inclination. There is no true joint mechanism in the articulation between the bodies. To each side and posterior to the bodies we have the articular processes. Here there is a true joint mechanism. The articulations here are therefore subject to all the disease and strains of joints elsewhere. There is normally a simple blocking mechanism present, whereby the superior articular processes of the first sacral vertebra prevent anterior slipping of the inferior articular processes of the fifth lumbar. In a large number of cases the articulation is crescentic in shape—looked at from above—in a transverse direction. In the tall slender type of individual the processes are more flattened in a transverse direction,

thus making for greater freedom of motion than would be possible in the crescentic type. In still another group, we will find the plane of the articulation, instead of lying in a coronal plane, being in a sagittal one. In this group, we do not have the simple blocking mechanism as described above, and these vertebrae are held in position merely by their ligamentous attachments.

In early childhood, a lateral roentgenogram of the vertebral bodies at the lumbosacral junction will show the bodies perfectly squared off. As the individual advances in years this shape is changed, and we see a certain amount of wedging of the bodies taking place. The anterior vertical height will be increased over the posterior. This change represents a reaction of the bone to strain, following the principle of Wolff's law, and may be of an extreme degree. In addition to the changes in the bodies, the intervertebral discs may show varying degrees of wedging.

The intervertebral foramina are bounded above and below by the intervertebral notches, in front by a portion of the inferior and superior surfaces of the adjacent bodies, and behind by the superior articular process with its covering capsule. It is this close proximity of the joint to the nerve traversing the intervertebral foramen that accounts for the irritation of the nerve trunk when the articulation is affected. Williams has demonstrated that in conditions of extreme lordosis, or where there is exaggeration of the wedging of the fifth lumbar body or the intervertebral disc just below, that there may occur an actual subluxation of the articular processes, with the superior process of the first sacral vertebra encroaching on the intervertebral foramen. This foramen is the smallest in the lumbar spine, and it has to transmit the largest nerve of the lumbosacral plexus—the fifth lumbar nerve, therefore, the margin of safety is greatly diminished.

Now as to the exact mechanism of the postural or chronic strain. Let us consider a line passing transversely through the body going through the center of each of the articulations between the fifth lumbar and the first sacral vertebrae as an axis of rotation. Now, as the spine is hyperextended, there will be

encroachment of the articular surfaces at their inferior aspect, and a widening at their upper end. This means that the ligaments at the upper portion of the articulation are under strain. This can be clearly demonstrated in a lateral roentgen ray view of the lumbosacral spine. If the strain is continuous, there will be stretching of the ligamentous capsule and pain will result. This is exactly what occurs in cases of postural defect of the spine. These individuals present an exaggeration of the lumbar hollow, with the sacrum assuming a more nearly horizontal position than normal. The anterior abdominal wall is relaxed and unduly prominent. In this position the spine is habitually being held in hyperextension, producing a continuous strain on the ligamentous capsules of the articular processes and on the anterior longitudinal ligament. With the forcing apart of the articular surfaces there will be encroachment on the intervertebral foramen, with possible nerve trunk irritation.

The usual history in these cases is that of a tired feeling in the lower spine, or possibly a dull ache. This is at first relieved on lying down, but the condition progresses so that even bed rest does not relieve pain. When this stage has been reached it indicates that the ligamentous strain has resulted in an inflammatory reaction—a typical traumatic arthritis. In practically all of these cases the strain is of the lumbosacral type. There will be fairly free motion of the spine. On assuming the erect position from the flexed there usually is complaint of some pain, as is likewise the case on hyperextension. Muscle rigidity over the erector spinae is not marked. There may be tenderness localized over the lumbosacral junction, and just to each side of the midline.

Treatment in these cases consists in first improving the posture by some mechanical means, and after the acute symptoms have subsided, making use of exercises to insure maintenance of correct posture. Of prime importance is the correction of foot pronation. This is an almost constant concomitant in these cases. In a certain number this will be all that is necessary to relieve the pain, but more should be done than simply ordering some inner lift to the shoe. If not, it will not be long before the

symptoms will have returned, on account of the spine having assumed a still further extended position. A lumbosacral belt is necessary to hold the spine in the corrected position. It should come up high enough to engage against the scapula, low enough to press firmly against the buttocks, and should be so constructed as to make a firm pressure with upward lift to the lower abdominal muscles. This will cause a diminution in the sharp lumbar hollow. The rationale of the postural exercises is to follow a progressive program. For instance, it is important to teach the patient to contract the lower abdominal muscles as the initial step in postural training. Next, to contract the gluteal muscles. When these two groups of muscles are toned up much has been accomplished in teaching the patient to support the spine in the proper position. Next, thoracic exercises are given, and then trunk exercises. The exercises are first given in the recumbent, and later in the erect position. Time and patience is required, and full cooperation of the patient is necessary.

### 3. TRAUMATIC AFFECTIONS

These may be of any degree of severity from simple muscle strains to serious types of fractures with dislocations. Of these the most common are lumbosacral and sacroiliac sprains.

At the lumbosacral junction, flexion and extension, as well as lateral motion, is comparatively free. In cases having deeply crescentic articulations the range of motion is less. Rotation is markedly limited not only at this site but in the entire lumbar spine. Therefore forces causing sprain at the lumbosacral junction are those striking the body in the symmetry plane, that is, in straight backward or forward direction. Falls upon the buttocks, violent hyperextension, heavy lifting with the spine held extended, are examples of the types of causative forces.

In a lumbosacral sprain the patient will note a sharp pain at the lumbosacral junction. He will hold himself erect and walk in a guarded manner to limit jarring of the spine. Flexion of the spine will be limited both in the erect and sitting position. The pain will be relieved by lying on a firm support. There will be a vari-

able amount of spasm in the erector spinae muscles, either unilateral or bilateral. Key and Conwell bring out an important point in that the point of maximum tenderness is just above and medial to the posterior superior spine of the ilium. There may or may not be sciatic, gluteal or lumbar radiation of the pain.

In sacroiliac sprain the patient usually gives a history of a sharp knifelike pain in the lower back, with a sensation of something having slipped in the spine. These patients stand with the spine slightly flexed, and listed laterally away from the affected side. In bilateral cases they will hold the spine in the symmetry plane. Flexion of the spine is limited, but is increased on sitting, in which position there is a relaxation of the pull of the hamstrings on the pelvis. Tenderness will be noted anywhere along either sacroiliac joint. With the patient recumbent, lateral compression of the pelvis may or may not elicit pain. If present, this is pathognomonic for a sacroiliac lesion. On straight leg raising, pain is usually brought out with the foot a short distance from the table. In lumbosacral cases, straight leg raising causes pain only after the thigh has been flexed to a marked degree.

In addition to single lesions, we may have a case presenting symptoms of combined sacroiliac and lumbosacral sprains. In sacroiliac cases a symptom that is fairly common is that of increased urinary frequency, most marked with the patient in recumbency.

Roentgen ray examination should be done in all these cases. Treatment should be prompt and energetic. The ideal treatment is recumbency for at least one week. If recumbency alone does not give relief, it should be reinforced with proper adhesive strapping. In sacroiliac cases the straps should be applied in a circular manner, beginning one inch in front of one anterior spine and terminating one inch in front of the opposite one. The straps should cover an area from the greater trochanter to the iliac crest. We thus produce annular constriction that helps limit motion in the sacroiliac joints. In lumbosacral cases, the straps should be applied in a diagonal manner, running from the lower angle of the scapula of one side to the greater trochanter on the opposite side. In

severe cases with leg pains, Buck's extension, with the legs and thighs on an inclined plane will give relief. On assuming the erect position these cases should be provided with properly fitted belts. Physiotherapy in the form of infra red exposures and massage to the back muscles is advantageous.

In chronic cases, relief may be obtained by manipulation under an anaesthetic, followed by proper exercises. In still another group of cases, where sciatic radiation of pain is a prominent symptom, epidural injections of large quantities of normal saline usually give relief. In all of these cases close attention must be given to the correction of faulty posture, because it is possible that this may be perpetuating the symptoms.

The most frequent fracture seen in this region is that of one or more transverse processes. Localized tenderness is noted, with muscle spasm, and limitation of motion of the spine. The roentgen ray examination corroborates the diagnosis. Treatment consists in either strapping, such as is used for lumbosacral sprain, or the use of a light plaster corset. The mistake usually made here is to immobilize for too long a period of time. Usually three weeks is sufficient. This is followed by graduated exercises and physiotherapy. Disability usually lasts for a period of three months.

Another group of cases is seen in injuries of the coccyx. There is usually a history of a fall or blow on the buttocks. Pain is severe, and is aggravated by sitting and on defecation. Localized tenderness is noted, and on rectal examination it is usually possible to determine if a fracture is present or not. Careful roentgen ray examination should be done. Treatment consists in strapping as for sacroiliac sprain, but carrying the straps a little lower. An air cushion should be employed in sitting. Very frequently there results a chronic state, particularly noted in women, of persistent coccygeal pain. These cases, if a neurosis can be excluded, will be relieved by coccygectomy. In the neurotic cases, simple spraying of the skin over the coccyx with ethyl chloride has given relief.

#### 4. INFLAMMATORY CONDITIONS

Of these the most common is arthritis. In



early cases we get a history of a slight pain in the lower back, associated with slight stiffness. As activities of the day are continued this pain and stiffness disappears. Later the condition becomes more severe and may be absolutely disabling. Nerve root disturbances may be noted. In early cases the roentgenogram is of no help, but in fairly advanced cases we will note changes in the articular processes in the form of blurring, irregularity of the surface, or a diminution of the interarticular space. It is important to visualize the articulation in profile, and to this end it may be necessary to take roentgenograms with the body rotated 45 degrees to the right or left. Treatment consists in general measures, such as eradication of demonstrable infected foci, high vitamin diet, increased intestinal elimination. Local treatment varies from the use of a simple belt to the application of a plaster jacket. This is followed by the use of physiotherapy, with guarded use of exercises.

Acute osteomyelitis, syphilis and tuberculosis may be the causative factor of the low back pain. Time will not permit a discussion of these conditions.

##### 5. NEOPLASMS

This is one of the rarer causes of low back pain. The sacrum is most frequently affected by a metastatic process. The original lesion is usually in the prostate or in the uterus. It is marked by the persistence and intensity of pain. It is this group of cases where the use of alcohol injections into the subarachnoid space is indicated. Deep therapy may help in alleviating the pain.

##### 6. AFFECTIONS OF THE INTERVERTEBRAL DISCS

These have only been given much study within very recent years. The process may be a gradual thinning of the disc, with prolapse of the nucleus pulposus. The nuclear body may prolapse into the epidural space, as in a case reported by Dandy, producing cord symptoms. With advancing years, there may be a process of dehydration of the nucleus pulposus, with the development of hypertrophic arthritic changes.

In conclusion, let me state that although these cases may tax our ingenuity and patience, with

a proper understanding of the underlying mechanical factors involved, much can be accomplished in alleviating their pain and suffering.

### "LIVER DEATHS" IN SURGERY

#### AN ANALYSIS OF 34 CASES, WITH A NEW EXPLANATION OF THE CLINICAL AND PATHOLOGIC PICTURE\*

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The so-called "liver-kidney" syndrome has occupied the attention of surgeons and research workers since Charles Gordon Heyd, in 1924, first pointed out its significance and its dire potentialities. The term is now generally used to cover that special group of cases following biliary surgery in which the fatal outcome cannot be attributed to the usual immediate factors of hemorrhage, shock or embolism or to the usual delayed factors of peritonitis or respiratory infections.

These cases are of two types. In one, death follows promptly upon operation, usually within 18 to 24 hours, hyperpyrexia is the outstanding clinical symptom, and the only notable autopsy finding is necrosis of the liver cells. In the other type death is delayed for 10 to 14 days, or even longer, renal symptoms dominate the clinical picture, and to the postmortem liver changes found in the first group are added similar degenerative changes in the convoluted tubules of the kidneys.

At present, though well over a hundred cases are specifically reported in the literature and at least as many others are more or less casually alluded to, opinions differ widely as to the incidence of the syndrome. Heuer, in his very extensive surgical experience, has seen no personal case which was not open to some other explanation. But Stanton, who has reported 15 cases, and Connell, who has reported

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25, in two separate series, believe, as we do, that the condition is even more frequent than the literature would indicate, an assumption in which we are supported by conversations we have purposely undertaken with various surgeons.

In an analysis of the 100 deaths following biliary surgery in the New Orleans Charity Hospital in the seven-year period terminating December 31, 1934, we have been able to locate 23 cases of the liver-kidney syndrome. Each of these records was subjected to very careful scrutiny and was included in the group only after every other possible cause of death had been eliminated. In at least half a dozen other instances the same syndrome was apparent, but they were not included because we were determined to present only cases free from all extraneous factors which might invalidate our thesis.

These 23 cases we have divided as follows:

Group 1A, 8 cases in which death occurred within 48 hours of operation, with hyperpyrexia as the outstanding symptom.

Group 1B, 5 cases in which death occurred within 72 hours, with hyperpyrexia as the outstanding symptom.

Group 1C, 2 cases in which death occurred within 6 days, hyperpyrexia developing suddenly 24 to 48 hours antemortem, after a fairly smooth convalescence. In each of these cases a pronounced oliguria was apparent during the last 24 hours of life.

The age range in this group of patients was from 24 to 68 years, practically all of them had some sort of chronic biliary infection, and while 3 were jaundiced and 5 were quite obese, all of them were regarded as good or reasonably good surgical risks. In the cases in which autopsy was permitted the only notable finding was degenerative changes within the liver.

Group 2A, 5 cases in which a smooth convalescence for several days was followed by oliguria progressing to anuria and by death in uremic coma. In 2 cases the operative wound ruptured, as in the similar cases reported by Helwig and Schutz.

Group 2B, 3 cases in which from 60 to 92

hours after operation a pronounced cardiovascular collapse occurred, with clear evidence of vasodepression, and in one instance repeated convulsions. Oliguria was pronounced in the 2 patients who lived longest, and none of them survived the collapse more than 6 days.

The age range in this second group was from 23 to 52 years, and in all there was a history of long-standing biliary disease, but no patient was considered a poor risk for surgery. As in the first group, both cholecystectomy and cholecystostomy were done, all varieties of anesthesia were employed, and all varieties of gallbladder disease were found, ranging from chronic cholecystitis to hydrops and occasional patches of gangrene. In all the cases in the second group the last urinalyses revealed albumin and casts, the NPN rose sharply, in one instance to 120, and autopsy revealed, in addition to the degenerative liver changes characteristic of group 1, similar degenerative changes in the convoluted tubules of the kidneys.

No common factor is evident in these cases, for the wide age range, the variety of anesthesia and the variety of surgical procedure introduce different factors in all cases. The pathologic process was rarely serious enough to make the patient a poor risk, and there is no clinical or autopsy evidence to suggest that occasional technical errors played any part in the final catastrophe.

Group 3 consists of 5 cases of pancreatitis in which, as pointed out by Heyd, the picture of deferred death after operation, with renal symptoms, resembles the picture already described in group 2. These patients were all fairly good risks as pancreatic disease goes, but in all of them the postoperative course was characterized by a deferred oliguria progressing to anuria and associated with a marked rise in NPN, in one instance to 92. In the 3 cases in which autopsy was permitted, typical necrotic changes were found in the liver cells and in the convoluted tubules of the kidneys.

Our fourth and last group consists of 7 cases of liver trauma similar to the cases reported by Stanton, by Furtwaengler, and by

Helwig and Orr, in which the same hepatorenal syndrome was apparent.

Group 4A consists of 4 cases, one following an automobile accident and the others following gunshot wounds. The age range was from 8 to 36 years. In the gunshot cases immediate exploration was done, in the other case the exploration was delayed for 6 days, until a profound jaundice had developed, as in the similar case reported by Helwig and Orr. In every instance death occurred within 36 hours of operation, with hyperpyrexia as the outstanding symptom, this being precisely the clinical picture seen in the group 1A cases following biliary surgery.

Group 4B consists of 2 cases, both following automobile accidents, in which immediate exploration was done. A fairly smooth course for several days was succeeded, exactly as in the cases in group 2A following biliary surgery, by renal symptoms and death in uremic coma. In one instance a profound jaundice developed, the icterus index reaching 210. In both cases autopsy revealed typical degenerative changes in the liver and kidneys, in one so extreme as to suggest the pathology of acute yellow atrophy.

Finally, in accord with Connell's and Wilensky and Colp's suggestion that the liver-kidney syndrome might also occur in other conditions, we reviewed a number of casually selected autopsies covering burns, intestinal obstruction and thyroid disease, and while we did not analyze these cases in detail, we were struck with their resemblance to the hyperpyrexia and hepatorenal deaths following biliary surgery. In most instances, when the clinical course was typical, the postmortem findings were also typical, necrotic changes in the liver, with or without similar changes in the convoluted tubules of the kidneys, depending upon how long the patient lived after operation or injury.

During the course of the clinical investigation just described we undertook also a series of experiments in which we attempted to reproduce in laboratory animals the clinical and pathologic processes which we had observed in human patients. Some of our experiments

failed entirely, including traumatic necrosis of the liver by various methods; various types of interference with the hepatic and portal circulation; implantation of normal liver into the peritoneal cavity; intraperitoneal and intravenous injection of the extracts of normal livers and of livers previously damaged by chemical methods; obstruction of the biliary tree; and intraperitoneal and intravenous injection of extracts of the livers of animals in which obstruction of the biliary tree was later released.

Two series of experiments, however, were successful. In the first series the biliary tree was obstructed for 12 to 20 days, at the end of which time an external biliary fistula was created by the insertion of a special cannula. In every case there was a prompt decrease in the jaundice, followed immediately by increasing listlessness, anorexia without gastrointestinal symptoms, and an oliguria which rapidly progressed to anuria. Death occurred within 72 to 96 hours in all the animals which were not sacrificed when their state was clearly terminal. Urinalysis showed albumin, casts and red blood cells, and in 5 cases the NPN, previously normal, was 72, 81, 93, 105, and 171. In every case autopsy showed the degenerative changes in the liver cells and the convoluted tubules of the kidneys typical of the lesions exhibited in the deferred liver-kidney deaths classified as group 2.

In the second experiment precisely similar clinical symptoms and postmortem hepatorenal changes followed the injection of saline and aqueous extracts made from the liver of a patient who died with the typical hyperpyrexia syndrome after cholecystectomy, although the alcoholic extract did not reproduce the picture. Autopsy on this patient had ruled out hemorrhage, bile leakage, peritonitis, embolism and pneumonia, and had revealed a marked necrosis of the liver cells. The urine in all the animals contained casts, albumin and red blood cells, but blood chemistry determinations, unfortunately, were not made, since the experiment was one of the first done and its full significance was not realized.

From our experimental work we feel justified in drawing the following conclusions:



1. The renal changes found at autopsy are the end-result of the release of the biliary obstruction and not of the obstruction itself, since they were absent in the dogs which were sacrificed for autopsy study before their experimental obstruction was released.

2. Hepatic changes are a constant concomitant of all cholecystic disease, but the extreme changes seen in this type of case are not so much the result of the original obstruction as of its release.

3. Whatever may be the nature of the toxic substance which is present in the liver in such cases, it is water-soluble, since the typical picture could be reproduced only by aqueous and saline extracts made from the liver of the patient who died a "liver-kidney" death after cholecystectomy and not by the alcoholic extract. We feel almost certain that we could have reproduced the same picture with extracts made from the livers of the dogs which died a uremic death after release of their experimental biliary obstruction had we used them in stronger concentration, and at present we are conducting a series of experiments to determine this point.

Our combined experimental and clinical observations have led us to evolve the following explanation of the liver-kidney syndrome: The patient with biliary disease, whether or not gross obstruction is present, always exhibits some degree of liver damage, which is not, however, incompatible with the stress and strain of ordinary life. But when surgery is undertaken, even under the most favorable circumstances, other factors are introduced, including the anesthetic, the trauma of the surgical manipulation, the associated drop in intra-abdominal temperature, and changes in intrahepatic and biliary pressure, and with these new factors the liver, already the seat of a pathologic process, cannot cope. As a result, its function promptly fails, and the toxic substances which reach it in the course of normal body metabolism are thrown off undetoxified. Then the liver cells, as they become increasingly unable to function, themselves undergo some necrotic change and themselves discharge into the circulation some additional toxic product

which originates in their own degenerating cellular substance.

The next assumption it seems to us, follows logically upon the first. The kidney, which is, after the liver, the great detoxifying organ of the body, must take up the work of the liver purely as a matter of physiology, when the detoxifying function of the liver fails. But in the kidney the margin of safety is very slight, and it is not fitted to handle even the normal products of body metabolism, let alone, in addition, the toxins liberated by the damaged liver cells. It promptly breaks down in its turn, therefore, and an overwhelming and lethal toxemia is the natural consequence.

We believe, finally, that the hepatic changes in these cases always precede the kidney changes, and it is our further opinion that if the patients who die promptly with hyperpyrexia, and who exhibit liver degeneration at autopsy, could be kept alive long enough, they also would show precisely the same clinical and postmortem renal changes as do the patients who die later with typical symptoms of uremia.

The theory advanced by Helwig, Schutz, Kuhn and Orr is quite similar to our own, the difference being that they postulate a specific action of the liver toxins upon the kidney cells. This hypothesis we consider unnecessary. We believe it only natural that the pathologic process should center in the kidney, since its convoluted tubules are the normal channels of excretion for foreign proteins, which we assume these liver toxins to be. In other words, the kidney is damaged simply in the fulfillment of the abnormal duty suddenly placed upon it, or, to speak more accurately, in the fulfillment of an exaggeration of its normal duty.

While time does not permit a discussion of the clinical implications of the study which we have undertaken, at least one point must be emphasized, the importance of realizing, as Graham and others have pointed out, that the patient with a damaged liver is a questionable risk not only for biliary surgery but for any surgery at all, however trivial it may seem. Particularly to be remembered, in the light of the theory we have advanced, is Wilensky's suggestion that liver function be evaluated by

tests of kidney function, and that in all types of biliary disease evidence of renal insufficiency be regarded as presumptive evidence of hepatic insufficiency. Obvious precautions are careful preoperative preparation, including the liberal use of glucose and of carbohydrates, a judicious selection of the anesthetic agent, the performance of cholecystostomy rather than cholecystectomy in doubtful cases, and gradual decompression rather than abrupt release of all biliary obstructions. Finally, since delay in the institution of surgery is the ultimate cause of all these catastrophes, it seems scarcely necessary to add that the prolonged medical treatment of cholecystic disease is without reason or logic and is attended with very real risks.

#### SUMMARY

1. There are analyzed in this communication 23 deaths following biliary surgery, 5 following pancreatic surgery, and 6 following liver trauma, all of which are indubitable instances of the so-called "liver-kidney" syndrome. A brief report is also made of the same syndrome in burns, intestinal obstruction and thyroid disease.

2. Two series of experiments are reported from which it is concluded that the hyperpyrexia deaths and the so-called hepato-renal syndrome which occur after biliary surgery are successive stages of the same pathologic process, the presumptive mechanism of which is set forth.

3. Prophylaxis is briefly discussed.

#### BIBLIOGRAPHY

Boyce, F. F., and McFetridge, E. M. A clinical and experimental study of the so-called "liver death." *Arch. Surg.*, 31:105-136, 1935 (extensive bibliography).

#### DISCUSSION

Dr. Alton Ochsner: Dr. Boyce's presentation is very conclusive concerning cause of death in those individuals who represent a real problem to the surgeon. There is probably nothing worse than to have a patient who is getting along well or in whom one can anticipate a quick recovery, have a tragic death such as these cases have.

In a very recent publication Stewart has been able to corroborate many of Dr. Boyce's experimental findings. His observations, which are largely morphological, show that following obstructions in the biliary tract, there are marked

changes in the liver in that within a few hours following the relief of the obstruction necrosis of proliferated cells of the mucosa of the larger ducts was observed. If this is true, it may be that this is one of the causes of the toxemia which these individuals have and that the sudden flooding of the system with foreign protein may be the cause of the hyperpyrexia in these patients.

As Dr. Boyce said, the patient with cholecystic disease who has liver damage—and all have—should be considered as a definite risk and a great deal can be accomplished by careful study preoperatively both as regards renal function and hepatic function. All of us have been in the habit of taking these relatively mild cases too lightly, and it is in the mild cases in which the trouble is not suspected that these liver deaths are apt to occur. In the badly jaundiced patient where adequate preoperative therapy is used, especially, large quantities of dextrose preoperatively, "liver deaths" seldom are seen, whereas they occur in a surprising number of individuals in whom no trouble is suspected. The lesson all can get is that every patient with cholecystic disease should be considered a definite risk, and all should be carefully studied and treated preoperatively.

#### CALCIUM-DEXTROSE THERAPY IN THE LATE TOXEMIAS OF PREGNANCY

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Cantarow<sup>1</sup> states that "the fundamental importance of the inorganic constituents of the body in the maintenance of normal cellular function, long realized by physiologists, is only now being fully appreciated by clinicians." He further states that "unless one is familiar with the significance of calcium metabolism in cellular physiology, it is impossible to appreciate the various functional aberrations which may result from a disturbance of calcium metabolism."

The subject of the late toxemias of pregnancy has been a mooted question since the early days of medicine, ever and anon coming up for discussion. I will discuss the subject from the angle of calcium metabolism in the maternal organism, considering calcium deficiency as a major problem in the causation and treatment of these conditions.

The typical pathological changes in the late toxemias are found in the liver. Ewing, Opie,

Williams, Allen and others describe a thrombosis of the smaller interlobular periportal vessels, with hemorrhagic and anemic necrosis, and occasionally diffuse thrombosis of the portal vessels with degenerative changes in the parenchyma. In the kidney, Fahr, Schwartz and Dorsett and Lubarsch view the lesion as a glomerulonephrosis, not as an inflammatory condition as seen in glomerulonephritis of infectious origin.<sup>2</sup> DeLee<sup>3</sup> states that most authors consider these changes in the kidneys as secondary either to the general toxemia or to the disease of the liver. In the brain, edema may be found with anemia, or hyperemia without edema. There may be areas of thrombosis, capillary hemorrhages and at times larger hemorrhages.

Calcium affects all the tissues of the body, either in the composition, building, maintenance or function of that tissue. It is part and parcel of the blood, muscle and bone, essential to growth, to the normal development of bone, skeletal muscle, nervous system and to the coagulation of the blood. It has a tonic effect on the heart similar to that of digitalis, essential to the normal physiological effect of the latter; it slows the heart rate, lowers the blood pressure and increases vascular tone. It depresses neuro-muscular excitability and increases diuresis in edematous states.

In pregnancy there is an extraordinary demand on the calcium reserve of the mother for the building and maintenance of the growing fetus, and this demand causes various degrees of reaction in different women, depending mainly upon the calcium supply and reserve. In the normal pregnancy most observers agree that there is practically no change in the blood calcium values.<sup>4</sup> Canterow<sup>1</sup> states that in normal pregnancy and in early labor, there is a gradual diminution of the total serum calcium, (10.61 to 9.61 mg.) slight increase in the diffusible calcium (5.08 to 5.55 mg) and a marked decrease in the non-diffusible calcium (5.53 to 3.49 mg).

In the late toxemias most investigators find a low blood calcium. (Finberg and Lash, Ivanyi, Rodecourt and Lizenmier, Bogert and Plass, Levy-Solal, etc.)<sup>4</sup> Others find a normal blood calcium. We must remember, however, the

well established fact that calcium deficiency may and does exist with a normal blood calcium, the calcium storage in the various organs, tissues and bones being drawn upon and depleted before a hypocalcemic blood condition develops.<sup>5, 6</sup> For this reason, the blood calcium estimates may not show the actual percentages in the tissues, hence the apparent contradictory findings of the various investigators. The preponderance of opinion is a low calcium index.

The blood sugar level is also unbalanced, most investigators agreeing to a hypoglycemia. Stander finds an acidosis, a decrease in the carbon dioxide combining power of the blood. This finding is agreed upon by practically all observers as also is the increase of lactic acid. There is little or no change in the urea and non-protein nitrogen content. King believes that liver functional tests afford evidence of or absence of hepatic injury.<sup>2</sup>

The low calcium index, due to the extraordinary demand and to the deficiency of calcium in the average American diet,<sup>7</sup> is in the opinion of many investigators indirectly responsible for the nervous imbalance, the tingling and numbness, occasionally painful in character, in the hands, arms, feet and legs, the tetany and toxemia of all grades to the severest eclampsia, the direct cause being guanidine, increased in the blood and tissues on account of a calcium shortage, calcium being necessary to counteract and neutralize this product.<sup>8</sup>

Guanidine, a toxic product of voluntary muscle action and of the chemical breakdown of nitrogenous food products in the body, is a nitrogenous base with a formula  $\text{NH}_2 \text{C} (\text{NH}) \text{NH}_2$ .<sup>9</sup> It is toxic to muscle and liver, causing in the liver, albuminoid degeneration, cloudy swelling and necrosis, the pathological findings in the toxemias of pregnancy.<sup>8</sup> Such a liver must of necessity be unable to metabolize carbohydrates and store glycogen, and as it becomes depleted, the glycogen supply in the muscles becomes deficient and lactic acid and protein waste, guanidine, are proportionately increased.

Minot and Cutler<sup>1</sup> showed that in dogs on a high protein diet, low in calcium, small doses



of carbon tetrachloride produced, in a few days, severe and fatal intoxication with the following symptom: fibrillary muscular twitchings increasing to convulsions, bloody diarrhea, vomiting, gradual weakness, stupor, coma and death, the pathological lesions being essentially those of acute severe toxic necrosis of the liver. The blood calcium was within normal limits, the blood sugar was decreased and there was an increase in guanidine in the blood. The increase in guanidine paralleled the severity of the symptoms. A significant observation was that the administration of guanidine produced an intoxication very similar to the one caused by this carbon tetrachloride and that calcium intravenously relieved the condition almost instantly. The addition of calcium to the diet prior to the administration of the carbon tetrachloride or guanidine prevented the development of these manifestations in practically every instance. Again, noting the resemblance between the picture of eclampsia and this toxemia of acute hepatic injury in dogs, they studied the guanidine content of the blood of eight patients with pre-eclamptic toxemia and four with true eclampsia and found it to be increased in every case. They state that prompt and striking relief from the extremely urgent symptoms followed the intravenous administration of calcium gluconate, 10 cc. of a 10 per cent solution.

Casparis<sup>10</sup> has shown that in dehydrated infants, with gastro-intestinal irritation, diarrhea and vomiting, restlessness often leading to tetany, convulsions and deep coma, with hypoglycemia and acidosis, again a picture of the late toxemia of pregnancy, the guanidine content of the blood was increased in every instance. All these symptoms, he states, were ameliorated by the administration of dextrose, but recurred. The use of calcium, even if the blood calcium was not low, gave permanent relief, thereby demonstrating that calcium exerts a protective influence against this toxic guanidine.

We know that parathormone governs the mobilization of the available calcium of the body. Paton<sup>11</sup> found that after parathyroidectomy, when the blood calcium levels fall,

there was a marked increase in the guanidine compounds in the blood and urine of animals.

Malmejec<sup>12</sup> maintains that there is an increase in the blood guanidine in the late toxemias of pregnancy, and that this guanidine is neutralized by the administration of calcium regardless of the blood calcium index. Major<sup>9</sup> says that this guanidine in small doses caused a marked and relatively lasting elevation in blood pressure, and, in larger doses, convulsions and death.

In view of these various observations and findings, it seems logical to assume that, in the treatment of these late toxemias, pre-eclamptic and eclamptic, the use of calcium and dextrose is not only justifiable, but indicated; calcium to neutralize the guanidines, the toxic effects of which are exerted principally against the liver, preventing it from properly metabolizing carbohydrates, and dextrose to neutralize the acidosis, maintain normal blood sugar levels and replenish the liver and muscle glycogen.

It is well known that simply supplying the calcium, which is easily controlled by proper diet and the administration of calcium salts, is not altogether sufficient, for the metabolism of this element involves two other factors, i. e. the absorption and the utilization. The absorption of calcium involves three factors: (1), the hydrogen ion concentration within the intestines; (2), the relative proportion of other substances in the diet, and (3), vitamin D. Calcium is absorbed in the upper small intestines and this absorption depends in a great measure upon its solubility which is greater in an acid medium. Consequently it should be given at the time when the intestinal alkalinity is lowest, one to one and a half hours before meals. Fats inhibit its absorption, forming, with fatty acids, insoluble soaps. Vitamin D promotes its absorption, assimilation and deposition in the bones. This vitamin is supplied by the activation of the ergosterol of the skin by sunlight, natural or artificial, and by the administration of viosterol.

As to utilization, parathyroid hormone governs the mobilization of the available calcium of the body, maintains a definite calcium level in the circulating blood by withdrawing it from the spongiosa of the bones, the store house of

readily available calcium.<sup>1</sup> It restores and maintains the normal balance between the diffusible and the non-diffusible fractions of the serum calcium, and elevates the blood calcium when no hypocalcemic condition obtains.

#### TREATMENT

In the treatment we have followed the classification of Mussey and Randell.<sup>2</sup> They divide these toxemias into the pre-eclamptic and the eclamptic with fully developed convulsions and coma. The pre-eclamptic they again subdivide into mild pre-eclamptic, including the less severe forms and the severe pre-eclamptic, including in this latter class those cases in which the development of convulsions and coma is imminent.

As to prophylaxis:—In the latter months of the average pregnancy, calcium and viosterol, vitamin D, should be used, and this predicated on a sound physiological basis. Pediatricians teach that their use is essential for the growth and proper development of all babies, and it seems as logical to use them in the average mother, not only to forestall trouble but also to enhance the supply of available calcium in the fetus, if this be possible as a calcium deficiency has been found in bones of children whose mothers were deficient.

In patients complaining of minor symptoms, nervous imbalance, tetany with tingling and numbness in the hands, arms, feet and legs with occasional cramps particularly annoying at night, the action of calcium and viosterol is almost specific. The sense of relief and well being obtained from their early use makes it imperative for the physician to use every means available to make these patients more comfortable during these trying months, and to protect them from the serious complications which, in a great majority of instances, are preventable.

#### MILD PRE-ECLAMPTICS

In the mild pre-eclamptic toxemias, upon the appearance of the first symptoms, nausea or vomiting, headache, disturbances of vision, epigastric pain, dyspnea on exertion, edema of feet and legs, sallow complexion with puffiness of the skin, increased blood pressure and albuminuria, the patient is placed on a low protein and fat and a high carbohydrate and cal-

cium diet, i. e., little meat and fat with an abundance of milk, vegetables, fruits, sugars and starches. Sunshine baths are insisted upon, with rest in bed, if the symptoms are urgent. Calcium gluconate or dicalcium phosphate and viosterol are given, the gluconate in level teaspoonful doses (about 60 grains) well diluted, three times daily, one hour before meals, when the upper intestinal alkalinity is lowest. The same applies to the dicalcium phosphate, given in doses of one or two tablets three times daily. Lactose is claimed to enhance the absorption of these by increasing the intestinal acidity through lactic acid fermentation. The viosterol is given in 10 to 20 drop doses twice daily.

The intake of chlorides is restricted, as it is well known that in nephroses, the kidneys seem to have lost most of their power to excrete chlorides, and an excess of sodium chloride results in the production of edema. Elimination through the bowels is promoted. As a rule improvement is marked in a week to ten days, when the treatment is modified according to the clinical condition presented. We have never used ultraviolet radiation to activate the ergosterol of the skin, depending on sunshine and viosterol. It is significant that in Siam, so Theobald has noted, where the inhabitants live mainly on a rice and vegetable diet with scanty clothing and abundant sunlight, toxemia of pregnancy is a rarity.<sup>2</sup>

#### SEVERE ECLAMPTICS

In the severe pre-eclamptic cases, when convulsions seem imminent, our main reliance is placed on parathormone in 20 unit doses hypodermically, to raise the blood calcium level, restore the normal relationship between the diffusible and non-diffusible fractions in the blood serum and to enhance diuresis, as all investigators agree that it promotes diuresis in acute and chronic nephritis and nephroses. It will improve the general condition, relieve the headache and dizziness, and the eye symptoms so often complained of, and cause a drop in the blood pressure. This parathormone maximum effect is obtained in about six hours. It can be repeated in eight to twelve hours with no fear of any untoward effect if calcium is given simultaneously. We then give it every twenty-

four hours as long as we deem it necessary, insisting on the calcium and glucose at the same time. The glucose may be given by drip or hypodermoclysis if the stomach is upset. Vio-sterol is also administered. We have always had improvement in twenty-four to forty-eight hours; then the management of the case was determined by the general condition and indications.

#### ECLAMPSIA

In the fully developed eclampsia with convulsions and coma, the treatment is along the same principals, our main reliance being placed also on parathormone. Morphine by hypodermic to control the convulsions is generally the first medication, as it is always at hand, instantly. This is followed as soon as possible by 20 units parathormone hypo. and 10 cc. of a 10 per cent calcium gluconate solution intravenously. The parathormone has a beneficial effect on the convulsions. Lopez states that a few hours, four to six, after the administration of parathormone he obtained a complete cessation of convulsions.<sup>1</sup> We had a similar experience in a case in which no morphine was used. We then administer fifty to seventy grams of dextrose in a 10 to 25 per cent solution intravenously with a view of supplying the necessary glycogen to combat acidosis, to prevent further liver damage and support and insure better functioning of the heart and kidneys. Elimination is promoted. There is generally some improvement in eight to twelve hours. If not, the parathormone is repeated, as also the calcium and dextrose with whatever symptomatic treatment may be indicated. As soon as the patient is able to swallow we give the calcium gluconate by mouth in teaspoonful doses with glucose lemonade.

Here again, the subsequent management of the case is determined by the general condition and indications. If labor has started, as it will in many instances, the outcome is left to nature, or it may be terminated by low forceps to protect both mother and child. If labor has not started, it may be induced, or if the condition of the patient is such as to demand immediate delivery, i. e. a primipara at term when the convulsions have been frequent and severe, with a living child an an undilated rigid os, delivery

by cesarean section is justifiable in the interests of both mother and child.

This plan of treatment was followed in ten cases, eight pre-eclamptic, five mild and three severe, and two eclampsias, convulsions and coma, with excellent results. Of the eight pre-eclamptics, all improved and were delivered of living children at full term except one who, although she improved and felt well, was never albumin free. Her pregnancy terminated spontaneously at the beginning of the eighth month without any mishap to mother or child. Not one of the severe pre-eclamptics developed convulsions; all were delivered at about term without any mishap to mothers or children, one by cesarean section (indication being deformity of pelvis), one by mid forceps—the other normally. Of the two with true eclampsia, convulsions and coma, one had no convulsions after the inception of treatment, even though no morphine was used. Labor was induced on the third day, and she was delivered of a still-born baby without any mishap to mother. The other case had thirty-two convulsions. Her condition improved after four hours of treatment and she was delivered by cesarean section of living twins, both children and mother leaving the hospital living and well.

The cesarean sections in this series were done by Dr. W. E. Barker. I am indebted to him for the privilege of including three of his cases in this report.

#### CASE ABSTRACTS. PRE-ECLAMPSIA MILD

1. Mrs. C. B. R. White, 23, 1 para, was well up to the 34th week, when she complained of headache, dizziness, nausea and occasional vomiting, disturbances of vision, shortness on exertion and edema of feet. First seen in 37th week. With these symptoms her blood pressure was 150/100; urine showed albumin a trace. She was put on a low protein and fat, high carbohydrate and calcium diet, calcium gluconate, teaspoonful before meals and viosterol 20 drops, twice daily. In 7 days she was practically well, blood pressure 130/90. Two weeks later, she was delivered of an 8½ lbs baby after a labor of 20 hours, low forceps gas-oxygen anesthesia 5 hours, without any mishap to mother or baby.

2. Mrs. E. J. S. White, 31, 1 para, was sick all during pregnancy. Was under treatment with no improvement. First seen about 28th week. She showed marked symptoms of toxemia, general



edema, irregular pulse with an occasional dropped beat, enlarged heart, blood pressure 190/100, urine 25 per cent moist albumin casts, red blood cells and pus. She was put to bed on diet with milk, calcium gluconate and viosterol. Ten days later she was improved, urine better, blood pressure 172/92. Eighteen days later she was very much better, blood pressure 154/90; urine, albumin 20 per cent, few casts, no R. B. C., few pus cells. Up a few hours daily. Eleven days later she was delivered, after a short easy labor, 3 hrs., of a premature, 8 months living baby. Recovery uneventful.

#### PRE-ECLAMPSIA SEVERE

3. Mrs. M. B., white, 22, 1 para. Good health. One sister has epilepsy; one brother idiotic. Pregnancy uneventful until the 39th week when she suddenly developed nausea and vomiting, nervousness, edema of legs, B. P. 168, scanty urine, albumin 50 per cent moist. She appeared rather sick. She was given parathormone 20 units hypo., glucose drip 5 per cent, calcium gluconate teaspoonful doses three times daily and viosterol. The parathormone was repeated in 8 hours, with relief of nausea and vomiting and increased diuresis. Glucose lemonade was pushed. Labor set in spontaneously in the next 24 hours, and she was delivered normally after an easy labor, without any mishap to her or child. Gas-oxygen anesthesia 4 hours.

4. Mrs. E. G. white, 1 para. Was well until the 35th week when she developed shortness with edema of the feet, B. P. 135, and a heavy trace albumin in urine. Was put on diet, calcium gluconate, viosterol. She was not co-operative and was refractory, and did not follow treatment, especially the diet. Four weeks later, after an unusually heavy meal, she complained of headache and dizziness again, edema of feet and legs, shortness, B. P. 164, with the urine full of albumin (boiled solid.) She appeared on the verge of true eclampsia. She was given parathormone 20 units, hypo., calcium gluconate and viosterol and glucose lemonade. The parathormone was repeated in 8 hours, thence daily for the next three days, with improvement in all symptoms, when labor set in. She was delivered by mid forceps after 18 hours, gas-oxygen anesthesia for 10 hours, without any mishap to her or the baby.

#### ECLAMPSIA

5. Mrs. J. P. T. white, 38, IV para. Pregnancy was uneventful until the 35th week when she complained of headache, nervousness, dizziness. She had edema of feet and legs. First seen about the 38th week at midnight in convulsions and coma, the second convulsion in an hour. She was given 20 units parathormone, hypo., and removed to the Sanitarium. She had two convulsions during this removal. None subsequently. Dextrose 60 grams in 20 per cent solution intra-

venously was given as soon as possible. Glucose drip 5 per cent followed. Parathormone 10 units 6 hours after the 1st dose. Urine showed much albumen, boiled solid. 24 hours later, she was very much improved. Conscious, and as child was thought dead, labor was induced, first by packing, then by introduction of catheter. She was delivered 24 hours later without any mishap. Child stillborn. Recovery uninterrupted.

6. O. N. colored, 23, 1 para, was first seen at 4 P. M., in convulsions, the 28th in the past 20 hours. Was comatose, stertorous respiration, general edema, pulse slow and rather soft, temperature 98° heart sounds clear but faint at the base, blood pressure 142/112, rales at the bases of lungs posteriorly. The mother stated that the patient had been sick for three weeks; headache, dizziness, blindness, constipation and scanty urine. Was given morphine sulphate, gr.  $\frac{1}{4}$  hypo, and removed to Sanitarium. At 5 P. M., she was given 20 units parathormone intramuscularly, and a flush. At 7 P. M., sixty grams dextrose 20 per cent solution with 10 cc. 10 per cent calcium gluconate was given intravenously. At 8 P. M., her general condition was somewhat better, but she had another convulsion on vaginal examination. This revealed a hard, undilated cervix; no labor pains. Delivery by cesarean section was then decided on. At 9 P. M., under ether anesthesia, she was delivered by the classical section, of twins, both living. She rallied well and had no convulsions after the operation; recovery was uninterrupted. Fifteen days later the mother and both children left the sanitarium living and thriving.

#### REFERENCES

1. Cantarow, Abraham, Calcium Metabolism and Calcium Therapy, Ed. 1 Philadelphia, Lea & Febiger, 1931.
2. Curtis, A. H., Obstetrics and Gynecology, Philadelphia, Saunders, 1, 1933. (Mussey A. H. & Randall, L. M., Toxemias of Pregnancy.)
3. DeLee, J. B., Principles and Practice of Obstetrics, Ed. 2, Philadelphia, Saunders, 1915.
4. Kilduffe, R. A., Clinical Interpretation of Blood Examinations, Philadelphia, Lea & Febiger, 1931.
5. Mendenhall, A. M. & Drake, J. C. Quoted in Year Book of Obstetrics & Gynecology, Chicago, Year Book Publishers, 1934.
6. Hartman, A. F., Theory and practice of puerperal fluid administration, J. A. M. A. 103:1349, 1934.
7. Editorial, Calcium in diabetes, South. Med. Jour. 27: 276, 1934.
8. Richardson, G. C., Ill. Med. Jour. 59: 453, 1931.
9. Major, R. A., Chemistry in Medicine, New York, Chemical Foundation, 1928.
10. Casparis, Horton, Guanidine as a toxic substance in the blood of infants following acute dehydration, South. Med. Jour. 25: 147, 1932.
11. Rienhoff, W. F. Jr., The Parathyroids, Dean Lewis, Practice of Surgery, Hagerstown, Prior, VI. 1929.
12. Malmjæc, R., Guanidinemia in relation to childbirth, J. A. M. A. 98: 1229, 1932. (Abstracted from Gynecologi et Obstetrique, Paris 24: 681-756, 1931.)

# WHAT THE PHYSICIAN SHOULD KNOW FROM THE CORONER'S STANDPOINT\*

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NEW ORLEANS

I ask of you your indulgence while I bring you a message regarding the work done by me, as your coroner, assisted by my most able assistant coroners and highly efficient secretary and office attaches. I cannot give too much credit to my office assistants who, at all times, make every effort to treat the public with courtesy and consideration and to make them feel that they are dealing with people who sympathize with them in their troubles and are only too glad to do everything they can to lessen their anguish and grief.

Except in a very limited number of jurisdictions, the investigation of deaths that require the attention of any agency of government is made by the office of coroner. It is not necessary to trace the history of this ancient office, save to mention that it was transplanted from England to the original Colonies; from them it was transferred to the States. In twenty-four of the States the office is provided for by the State Constitution. The duties of coroner are prescribed by statute. Fortunately, the statutes relating to coroners in Louisiana have undergone essential modifications that better fit them to meet modern conditions.

Practically all insane or suspected mental cases in the Hospital for Mental Diseases are committed through the coroner's office and their release or interdiction proceedings are executed through this office, thereby entailing quite a bit of work not generally accredited to the office of coroner. The coroner is also ex-officio City Physician, which duty requires him to see and make many examinations of the inmates of the Parish Prison and House of Detention, for whose health and medical welfare he is responsible.

It will be noted that the natural deaths for the year 1934 were 1096, a considerable increase over 1933, which numbered 978. A slight in-

crease in the miscellaneous accidents was shown, there were 167 for 1933 and 173 for 1934. Homicides likewise showed an increase from 70 in 1933 to 80 in 1934. The suicides showed a very noticeable reduction from 81 in 1933 to 58 in 1934.

In spite of the splendid efforts on the part of our Commissioner of Public Safety and the hearty cooperation of our police department in the enforcement of traffic regulations, there has been a slight increase in automobile injuries for 1934 as compared with 1933.

Auto truck injuries showed a decrease from 13 in 1933 to 9 in 1934. Automobile and auto truck injuries showed an increase from 3 in 1933 to 8 in 1934. Automobile and motorcycle injuries were none in 1933 and 2 in 1934. Automobile and electric street railway injuries were none in 1933 and 4 in 1934. Automobile and bicycle injuries were 2 in 1933 and none in 1934. Automobile and steam railroad injuries were none in 1933 and 2 for 1934. Automobile and taxicab injuries were one each for the years 1933 and 1934. Automobile and wagon injuries were 2 for 1933 and none for 1934. Automobile and fire truck injuries were 1 for 1933 and none for 1934. Motorcycle injuries were 2 for 1933 and 3 for 1934. Taxicab injuries were 3 for 1933 and 2 for 1934. Horse and mule drawn vehicle injuries were 1 for 1933 and none for 1934. Steam railroad injuries were 6 for 1933 and 7 for 1934. Electric street railway injuries were 8 for 1933 and 4 for 1934. Aeroplane injuries were none for 1933 and 3 for 1934.

The following are some of the cases to be reported to the coroner's office:

1. All deaths occurring in any hospital within twenty-four hours of admission.
2. All injured cases, old or recent.
3. All deaths due to unknown causes.
4. All deaths due to suspicious causes.
5. All abortion cases whether self-induced or otherwise.
6. All violent deaths.
7. All sudden deaths.
8. All accidental deaths.
9. All cases without medical attendance

\*Read before the Orleans Parish Medical Society, July 8, 1935.

within thirty-six hours prior to the hour of death.

10. All deaths due to drowning, hanging or strangulation.

11. All deaths due to gun shot, shot gun, stab wounds, burns, electricity, lightning, tetanus, etc.

12. All homicides.

13. All suicides.

14. All poison or suspicious poison cases.

#### PERMISSION OR AUTHORITY FOR AUTOPSIES

It is advisable at all times to be extremely cautious in this matter to avoid any unpleasant complication which might arise where unauthorized or improperly authorized post-mortems are done. It is best to get this permission or authority in writing, or if not in writing to secure dependable witnesses to the granting of such permission. No autopsy should be done without securing proper authority, for without this you may run the risk of an unpleasant suit for damages. It has been held in many courts, that, although the deceased has during his or her life willed his or her body for purposes of dissection, the family can or may prevent its dissection.

Certain post mortem examinations may, however, be legally performed or ordered regardless of the rights, wishes or feelings of relatives or friends by a coroner or certain other officers of the state or parish as part of their official duty.

In all other cases, authority or permission should be secured from or granted by the relative or persons claiming or responsible for the burial of the body. Where none of the relatives are present or cannot be contacted, it is wise, for your protection, to make sure that those acting for the relatives in granting permission for the post mortem have sufficient right or authority from the family to do so in case the kin should, as often happens, become vicious and threaten to prosecute or does prosecute after the autopsy has already been performed.

#### CERTIFICATION OF DEATH

In the matter of inheritance, insurance and other legal matters, every physician should feel it to be his duty to the family and relatives to

accord them that protection, which they certainly deserve, by accurately and completely filling out all death certificates.

For the same reason, all coroner's cases should be certified through this office, and if the physician would properly refer the family, undertaker or insurance companies to our office for such certificates, it would assure the family of the deceased the protection they deserve, and would often prevent the long delay in collecting their much needed insurance.

All injured cases, of any nature or kind, and whether old or recent, and whether death was due to some concurrent or complicating disease, like pneumonia, etc., continues to be a coroner's case, and should be reported to his office and cause of death certified to by him.

If a physician is not positive as to the cause of death, or if there is any reason to believe death has been due to violence or to suspicious causes, he should disregard any pressure that might be brought by the surviving members of the family and do his duty as laid down by the statutes of the State and refuse to sign a certificate. In cases coming under this category, the coroner is automatically required to assume charge of the case and, in cooperation with the attending physician, thoroughly investigate the cause of death.

The following is found in Section 2, Act No. 241, of July 14, 1926:

"that it shall be the duty of the coroner to hold an inquest or make an investigation in all cases of sudden death, violent death, death due to unknown causes, death without attending physician or other remedial treatments or deaths in which there is suspicion as to the cause, with the right to other autopsies in any such cases in his discretion." The coroner may summon witnesses at such time or place as he shall direct, and may enforce their attendance by attachment.

Article 39 of the Code of Criminal Procedure for the State of Louisiana says:

"It shall be the duty of any physician and of any person in charge of any hospital or institution, or of any person who shall have first knowledge of the death of any person who shall have died suddenly, accidentally, violently or as



the result of any suspicious circumstances, or without medical attendance within thirty-six hours prior to the hour of death, or in any case of death due to what is commonly known as an abortion, whether self-induced or otherwise, to immediately notify the coroner of the death. It shall be unlawful for any undertaker, embalmer or other person to remove any body from the place where such death occurred, or to prepare same for burial or shipment, without first notifying the coroner and receiving permission to remove the body."

Article 40—"Any person who shall fail to comply with the provisions of this title shall be deemed guilty of a misdemeanor and upon conviction thereof shall be sentenced to pay a fine not to exceed one hundred dollars or to be imprisoned, in the parish jail for a period not to exceed ninety days, or may be both fined and imprisoned as aforesaid."

In closing let me appeal to you for a closer cooperation in upholding the traffic regulations, thereby avoiding many of the appalling accidents and deaths which we are experiencing at this time.

I also ask of you your cooperation in reporting all coroner cases to my office as soon as possible, thereby assuring better service to you and your patient and the public at large. The sooner we know about these cases the better we are able to institute a thorough investigation of the case and to turn the body over to the undertaker and family. It is highly important that the embalming be done as soon as possible to properly prepare and preserve the bodies.

I assure you that my office is at all times ready and willing to cooperate with you and I shall appreciate any opportunity accorded me to advise and consult with you regarding matters connected with this office, always keeping in mind my duty to you, the family and the public.

## MODERN THERAPY IN THE TREATMENT OF BURNS\*

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NEW ORLEANS

Assyrians used bizarre salves to alleviate the pain and aid the healing of burned areas. Although improvements in therapy were attempted at various times including the submersion baths advocated by Hebra in 1862, it was not until the past fifteen years that any real progress has been achieved. And yet what have we achieved?

In a modern surgery text, an edition not so long published, a first aid treatment recommended carron oil. In any accident service a large number of burns entering have previously been treated with this inefficient, filthy carron oil, butter, lard or other ingredients that only add to the already difficult proper treatment. Most such first aid therapy is given by the well intentioned friend but too often also by the attending physician.

Before further discussion, let me digress and consider the pathology and altered physiology in a burned patient, an understanding of which will inevitably lead to rational therapy. There are two main factors to consider, the local lesion and the generalized changes in the organism.

Surface burns are arbitrarily divided into three degrees:—First degree is merely one manifested clinically by erythema and histologically by dilatation of the capillaries directly under the epithelial layer, with a mild inflammatory exudate. Second degree by vesiculation or blister formation and in these there is fluid accumulating, at the expense of the surrounding damaged cells, between the epithelium and underlying cutis. Third degree is supposedly complete destruction of the epithelial layer and parts of the underlying structures. That this

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rarely happens at least over any considerable area can be appreciated when we remember that there are hair follicles, sweat and sebaceous gland islets distributed throughout the cutis, all being potential epithelial germinal centers.

Immediately following this local destruction of epithelium the host begins to react by both vascular and nervous phenomena. The denuded cuticular capillaries dilate and by apparent change of osmotic pressure large amounts of the body fluids shift to the affected area<sup>1</sup> and much is lost by superficial exudation. The blood rapidly becomes more concentrated as its fluid content continues to be lost until it may become two or three times more viscid than normal, at which point circulation is definitely impaired in all organs, oxidation is incomplete and the vital functions cease. Along with this depletion comes an imbalance of the chloride ratios in the circulating blood, leading the patients rapidly into a state of acidosis. These two extremely important factors were first prominently brought out by Underhill<sup>2</sup>. These have been elaborated on and experimentally and clinically<sup>3</sup> proved by many observers in the ensuing years until today it appears these are the most potent factors causing death of severely burned individuals in the early stages.

The theory propagated by textbooks of today concerning toxins circulating in the blood has failed to be properly substantiated. This toxin of unknown substance was to have originated in the burnt epithelial proteins and to have been absorbed from the denuded surface. The fact that even strychnine in large amounts applied to a recent burned area fails to be absorbed points strongly to the contention that the powers of absorption in this area are extremely low.

The nervous reactions are probably somewhat overestimated but undoubtedly from an extensive traumatized surface many nervous stimuli must reach the central nervous system and produce at times the condition which is called shock. There is no pathologic basis but only the common clinical experience of similar allied painful traumatic conditions.

Now in the treatment of burns the one most important factor is the saving of lives; consider then briefly the causes of death. A relatively

few die within the first six to twelve hours obviously of shock, the majority in the period from twelve hours to the fourth day from what is generally considered to be due to blood concentration and acidosis, the remainder probably of sepsis in the burned area.

The treatment of shock is well known: morphine, heat, fluid. This is of such importance that any treatment to the local lesion should be abandoned if the symptoms are at all severe. Wrapping the patient in warm blankets and hot water bottles keeps the patient comfortable until they can be moved, if necessary, for further treatment.

If the patient is not in severe shock, the local lesion can be treated at once. Too seldom do we realize that we are dealing with a true surgical wound. One would not think of putting oil or grease into an open laceration. Yet bacterial infection or invasion in a raw burned area is just as possible, even more so, than in the former. The wound must first be cleaned, removing all tissue tags, rupturing vesicles, cleaning adjacent skin well with ether or plain soap and water until there is a relatively aseptic field. Probably the best, but impractical in many situations, is the submersion and bathing in saline baths. Now as to a local application. It must be analgesic to alleviate the pain, it must be protective to prevent further irritation, eliminate further exudation and finally it should be antiseptic to remove and protect against bacterial invasion.

In 1925 Davidson<sup>5</sup> introduced the tannic acid treatment of burns. A solution of this applied makes a firm eschar over the area by precipitation of the local protein material, is an excellent analgesic and has slight bacteriolytic properties. The method and strength of application can be varied greatly without lessening its efficiency. Frequently it is not necessary to take time to weigh the exact quantities so as to make specific five or ten per cent solutions. The drug is not toxic and can be used in high dilutions without untoward effects. Tannic acid is readily soluble in water and can be applied by sponges or sprays. Every household has a source for tannic acid although it is not usually realized.

Here, I must stop and give credit to a coun-

try practitioner for observations years ago for which he has never been given proper credit. Doctor W. H. Searles<sup>4</sup> of Warsaw, Wisconsin, published in 1871 his treatment for burns and scalds. It consisted in using tea leaves dissolved in warm water and applied to the surface. This, gentlemen, was the original tannic acid treatment of burns.

A fresh solution of tannic acid is applied to the burned area every half hour for the first three hours and then every hour or two for the ensuing twenty-four hours at which time an eschar is formed and no further applications are necessary. As epithelization progresses under the eschar it is peeled off until on the tenth day, as recommended by most authorities, the remaining eschar may be removed with moist dressings leaving a clean granulating surface.

The above local applications answer many necessary specifications but are still not ideal. In an attempt to improve upon this Doctor Warfield M. Firor of Johns Hopkins began the use of a one per cent aqueous solution of gentian violet applied in the same way as the tannic acid. Several workers including myself<sup>5</sup> have used this remedy rather extensively. It has several definite advantages over tannic acid. This latter is a rather poor antiseptic and streptococcal infections, the cause of late toxemias and death, are harbored under the rigid eschar for long periods before detection is possible.

The gentian violet is a specific antiseptic for staphylococci and streptococci and it is extremely uncommon for any infection to supervene. If infection does occur the soft pliable eschar formed by the dye immediately tells the observer that all is not well. In such cases the local eschar around the softening is removed painlessly with a pair of forceps and a reapplication of the dye takes care of the offending organisms and again completes the covering. An eschar of this type can be formed directly over the folds of the body and still allow free motion of the part. It in no way injures the underlying delicate isles of epithelium and one is surprised that by the end of the fifth day not only does epithelization begin on the edges

but the purple eschar peels from over the middle surface and in two weeks complete healing occurs in nearly every instance with no deformities. Apparently the most undesirable factor in the dye therapy is its ability to stain surrounding elements as attendant's clothing, sheets, etc.

Recently, cognizant of the shortcomings of tannic acid, certain ingredients have been added to it. Clark<sup>6</sup> in attempting to make the solution more antiseptic has added Dettol\* to a five per cent tannic acid solution. The application is identical and the added antiseptic is purported to prevent infection. Bettman<sup>7</sup> has innovated a rather novel method which overcomes several deficiencies. Briefly, it is the application of a regular five per cent tannic acid solution followed immediately by a ten per cent silver nitrate solution. This leaves a thin black eschar which adheres closely to the underlying skin. This dressing is not only antiseptic but can be completed in a short time and eliminates hospitalization. There have been no cases of argyria in a large number attempted. I have tried this combination in several cases with small burns with excellent results.

There are numerous proprietary salves on the market which attempt to combine analgesia and antiseptics. The one I believe most efficacious is gentian violet jelly<sup>5</sup>. This is easily made by adding thirty grams of tragacanth to one thousand cc. of a one per cent aqueous solution of gentian violet to which may be added a small amount of glycerine to keep it from drying out. This preparation lasts indefinitely. These jellies are applied to a gauze in a thick layer and then applied to the burned area and they act nearly identical as the liquid, only they require only one application. This feature is ideal for the every day burn patient that comes into your office. The dressing can be removed from the ambulatory patient in forty-eight hours and a protective eschar remains until such time as healing is complete.

As to the general management following the initial shock therapy there are several important factors to keep in mind. Maintain body

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\*A proprietary antiseptic used in the British Isles.



heat, fluids and chloride ratios. The use of the heat tent and more recently the introduction of a hot air blower will suffice to maintain body temperature. The latter procedure will also prevent moisture accumulating with resultant softening of the eschar. The blankets and hot water bag are sufficient in an emergency but the burned area should preferably not remain in contact with covering of any kind during its healing stages.

The maintenance of body fluid balance is not so easily attained. So much fluid pours from the vessels that large replacements are necessary. Every avenue of approach can be used; the rectum, veins, subcutaneous and oral administrations. The latter of course, is easiest but frequently does not suffice and the intravenous route seems the next most logical. I have given twelve thousand cc. of fluid in twenty-four hours when occasion demanded without deleterious effects.

At times the fluid fails to dilute the blood but passes directly into the tissue spaces causing edema. To combat this gum acacia infusions are resorted to; this substance being impermeable to the vascular endothelium. A six per cent solution of this is easily prepared by diluting the thirty per cent fifty cc. ampules on the market five times. In the laboratory hourly hematocrit or hemoglobin values give us the exact index as to the concentration. How-

ever, it is highly improbable that too much can be administered and 8000 cc. for twenty-four hours per all avenues never leads to adverse results.

In these administered fluids you have a ready vehicle for replacement of chlorides and glucose buffered by insulin all of which will combat a possible acidosis.

In conclusion any therapy in the treatment of burns must primarily save the life of the individual. This is done by instituting such measures that prevent, shock, concentration of the blood, acidosis and infection. Following this, prevention of complications, comfort to the patient and economics can be duly considered.

#### REFERENCES

1. Harkins, H. N.: Shift of body fluids in severe burns. *Proc. Soc. Exper. Biol. & Med.*, 31:994-995, 1934.
2. Underhill, F., Harris, B. R. et al: Blood concentration changes in extensive superficial burns, and their significance for systemic treatment. *Arch. Int. Med.* 32:31-49, 1923.
3. Davidson, E. C.: Tannic acid in treatment of burns. *Surg. Gynec. & Obst.*, 41:202-221, 1925.
4. Searles, W. H.: *Chicago Medical Examiner*, p. 207, April, 1871.
5. Connell, J. H., Fatheree, T. J., Kennedy, C. B. and McSwain, G. H.: Treatment of burns with gentian violet; preliminary report, *J. A. M. A.*, 100:1219-1220, 1933.
6. Clark, A. M. and Cruikshank, R.: Observations on treatment of burns. *Lancet*, 1:201-204, 1935.
7. Bettman, A. G.: Tannic acid-silver nitrate treatment of burns; method of minimizing shock and toxemia and shortening convalescence. *Northwest Med.* 34:46-51, 1935.

# NEW ORLEANS Medical and Surgical Journal

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## INCREASE THE MEMBERSHIP

In the section devoted to Louisiana State Society news there is a letter from President Gray which deserves to be read by every member of the State Society. Dr. Gray wants to increase the membership and so should every man in the rank and file of the organization. The reasons for augmenting our rolls are definite and positive. The practice of medicine may, in the next few years, undergo revolutionary changes. It is only if the medical profession is well organized that we, as physicians, may be in a position to withstand attacks upon

us from various sources and from different angles. Every active practitioner of medicine should be a member of his Parish, District and State Society. Every physician should be prepared to stand back to back to combat measures which may be harmful to the individual physician. A united front would mean a tremendous lot to the leaders of organized medicine because then they can say that they have back of them practically the entire medical profession.

To secure a full membership can only be done by personal contact with those physicians who do not belong to the ranks of organized medicine. It is useless to write or to send cards or even to write editorials that will not be seen, and if they are seen probably will not be read. The individual physician who is outside the fold should be told by his friends forcibly that it is not only for the good of the profession as a whole but it is decidedly to his personal advantage to belong to the guild. Certainly he ought to be sold to the fact that it will be to his advantage to be with us when these anticipated attacks on medicine will develop. Personal contact is really essential. It would seem that if every man not in the local society was to be contacted by one of his friends who is a member there ought to be a marked increase in the membership. If the President of each medical society would take the list of men in his vicinity or district and definitely assign one of the men in his society to get in touch with, and to appeal to, one of the non-members the results should be surprisingly good. There are entirely too many generalities spoken and written and not enough concrete, definite, personal effort made to get men into medical circles, organized for the advancement of the physician in scientific matters and for his protection in economic affairs. Let the Presidents of the constituent societies of the State Society nominate a member who is a friend of a non-member to go after this recalcitrant fellow and not let go of him until he is pledged to join up with the local organization. If this is done then in April when the annual meeting is held at Lake Charles there should be a gratifying increase in our membership.

## MEDICAL ECONOMICS

The Committee on Legislative Activities of the American Medical Association has sent out a bulletin which has some thought provoking statements in it. It starts with an underlined capitalized declaration which reads: "Less discussion of medical economics; more emphasis on social aspects of sickness". Medical economics is a term, the Committee suggests, which should be done away with because it is construed as purely a medical problem and apparently to the laity connotes selfish financial interests of the profession. Social aspects of sickness on the other hand is fairer to the patient and gives more information to the public.

The Committee stresses these facts: An adequate income provision for normal living and working conditions; inadequate income results unfavorably on the individual because of insufficient food, poor home conditions, lack of clothes and disturbed psychogenic states. As a result subnormal health follows and many severe forms of protracted sickness. Medical care can not do much for the patient when economic conditions are unfavorable. "Sufficient income for normal living to reduce sickness would be more effective than a few weeks of inferior, politically controlled medical service after chronic disease and permanent disability are established".

The wages paid WPA workers in most places are barely enough to subsist on. In three States, Wisconsin, Nevada, Montana, and in New York City, these wages have been increased to prevailing wages amongst the employed, which allows for better living and social conditions. Any new method to extend medical service can not provide worth while care, if it is based on inadequate payments made from a very low wage. The Committee's last comment is that the medical profession has responsibilities in advising the public. Good health and medical care in sickness are dependent upon an adequate living wage and from this only can healthful living conditions and competent medical care be provided.

The statement of the Committee, abstracted above, certainly is full of good common sense but to us it is doubtful if the term "social as-

pects of sickness" is superior to "medical economics". After all, the problems that have to do with the economic adjustment of the physician to the present day conditions have comparatively little to do with the very broad problem of sickness amongst the indigent, the inadequately paid, or even the more favored financial group. All physicians would like to see everybody paid a wage which is adequate for self respecting living and given enough to put aside a nest egg to meet unexpected contingencies, however, there are innumerable physicians who themselves do not have an income which is adequate for their needs, nor are they able to create any reserve. It might be selfish to consider the economics of medical practice as solely a medical problem but after all it is a real problem for the doctors that has to be discussed amongst themselves.

## DIPHTHERIA AND DEATH

A recent article by Hoyne\*, who is in charge of the large contagious disease service at the Cook County Hospital, discusses rather fully the causes of death in diphtheria. Of course at the start he makes it obvious that there is no reason why any death should occur in this disease if the child population is immunized at an early age. However, this much to be desired prophylactic measure is by no means a universal procedure. Children do die from diphtheria and the cause of death is asphyxiation, bronchopneumonia or myocarditis (toxemia), according to Hoyne. In the treatment of the first condition tracheotomy or intubation has to be performed. Diphtheria antitoxin is not sufficient to save the patient. It is rare that the child with this type of diphtheria dies from the complication of myocarditis, and paralyzes likewise are rare.

Bronchopneumonia is obviated in part by using surgical technic, not only during the operation of tracheotomy but in the subsequent care of the patient.

The meat of this article has to do with the prevention of the toxic myocarditis which causes the greatest number of fatalities. Hoyne

\*Hoyne, A. L.: Causes of Death in Diphtheria and Their Prevention. *Am. J. Med. Sci.*, 191:271, 1936.



likens this type of myocarditis to an executioner about to carry out a death sentence. The method that is employed at the Cook County Hospital to prevent this lethal complication is by the administration of glucose in 10 per cent solution intravenously. The glucose solution is given in quantities varying from 500-1000 c. c. according to the size of the patient. The treatment is repeated daily for at least eight days. Sometimes it is continued longer; in one instance for thirty-seven days. The results have been most satisfactory. In 83 patients who were critically ill the mortality rate was only 10 per cent, whereas the expected rate would be as high as 50 per cent. One of these deaths occurred within an hour after admission to the hospital and another within twenty-four hours. All of these 83 patients were in desperate condition.

The author speaks of the "bull neck" which is encountered commonly in patients with diphtheria who have a profound toxemia. There is a cervical adenitis which is rather pronounced with the surrounding tissues swollen from edema. Such a patient is clear mentally, usually has a profuse nasal discharge with a foul

odor, and quite generally marked albuminuria associated at times with an enlarged and tender liver. There is not a pronounced or marked temperature reaction. With the administration of anti-toxin the patient starts to improve and may continue to improve up until the tenth or twelfth day, then there occurs a sharp fall in the pulse rate, a common omen of impending danger although the patient is to all intents and purposes well. Frequently within the next 12-24 hours abdominal pain occurs and if there is marked vomiting death is almost inevitable from the associated diphtheritic myocarditis.

The suggestions of Hoyne seem well worthy of emulation. Bear in mind that his group of patients treated with glucose consisted of those who had been ill more than three days before receiving anti-toxin; those who had "bull neck" irrespective of the day of the disease; those who had marked albuminuria, and all post-nasal cases and malignant types of any character. If glucose solution administered daily will prevent the dreaded cardiac complications of diphtheria then it seems a rational procedure to carry out because it can be done with ease and is, after all, a relatively simple measure.

## HOSPITAL STAFF TRANSACTIONS AND CLINICAL MEETINGS

### SCHUMPERT SANITARIUM

After dinner served in the sanitarium dining room the evening of January 14, the staff was called to order with Dr. George Garrett presiding.

Roll call showed 20 members and 5 visitors present.

The minutes of the previous meeting were read and adopted.

There being no committee reports or outstanding business, the scientific program was opened.

I. Dr. Paul Winder discussed functional uterine bleeding, demonstrating first, by lantern slides, the normal menstrual cycle. He discussed the diagnosis and indications for treatment in the three forms of functional bleeding, due respectively to hyperplastic endometrium, irregular shedding of the endometrium and irregular ripening of the endometrium. The discussion was opened by Dr. Mays and continued by Drs. Wren, Walke, Craig, Yearwood, Edwards, Bodenheimer, Blandino, Perrino and closed by Dr. Winder.

II. Dr. C. H. Potts presented a case report of carcinoma of the pancreas in a 50 year male, confirmed at autopsy. The case was discussed by Drs. Wren, Birdwell and Stamper.

The Hospital report for the past month was read by the secretary. Deaths occurring during the month were discussed by Drs. Birdwell and Geo. Garrett.

C. H. Webb, M. D.,  
Secretary-Treasurer.

### THE SHREVEPORT EYE, EAR, NOSE AND THROAT SOCIETY

The Shreveport Eye, Ear, Nose and Throat Society met in regular session at the Charity Hospital the evening of Monday, February 3, 1936, at 7:30 o'clock. The President, Dr. John T. Crebbin, presided. The following members were present: Drs. Crebbin, Smith, Atkins, LaRue, Scales, Beene, Boaz, Wilkinson, of Shreveport; Dr. Dickinson from South Dakota.

The scientific program consisted of seven cases: 1—Dr. Scales presented a white girl, 10 years of age, who had been bitten through the upper left lid by a hog. A plastic operation had been performed with a very satisfactory result.

2—Dr. I. Henry Smith presented a young man with a central choroiditis of the left

eye. Fields that he had taken showed a central ring scotoma with enlargement of a blind spot. The etiology remains undetermined.

3—Dr. Boaz presented a young man who had been burned about the face by gasoline explosion which resulted in considerable deformity of the lower left eye lid. He had obtained excellent results by skin grafts taken from the thigh.

4—Dr. Atkins presented a negro man on whom he had performed a radical frontal sinus operation following the Lynch technic. The result was very satisfactory.

5—Dr. Atkins' second case was a negro man admitted with a diagnosis of nasal polypi. Examination showed a growth in the left nostril the size of a buckshot, granulomatous in character. This was believed to be a gumma.

6—Dr. Wilkinson presented a negro man who was admitted to the hospital in September 1935, with the diagnosis of aural polyp. A radical mastoid operation had been performed for the purpose of removal of the polyp. At the time of presentation, there was a recurrence of the polyp, accompanied by a discharge of pus through two fistulous tracts in the line of the mastoid incision. Within the previous week, he had been running high temperature and complained of pain throughout the left side of his head. The question of subsequent treatment was discussed, and various opinions were given.

7—Dr. Wilkinson also presented a white man whose nose was badly fractured about three months previous. Several suggestions were offered as to the best procedure for correcting the deformity.

It was moved and seconded that the reading of the minutes be dispensed with.

There being no further business, the society adjourned, to meet the first Monday in March 1936.  
John T. Crebbin, Pres. J. A. Wilkinson, Sec.

#### NORTH LOUISIANA SANITARIUM STAFF MEETING

The North Louisiana Staff meeting was called to order by the President with 27 members and 2 visitors present, January 28. Minutes of the previous meeting were read and adopted. Dr. Herold reported for the Training School Committee, and read the annual report of the Superintendent, which was adopted and incorporated as part of the minutes. Dr. Herold reported for the special committee on dentists without recommendation and asked for a round table discussion. After discussion by Drs. Crebbin, Gowen and Rigby, Dr. Rigby moved the matter be referred back to the Committee for further study. The motion was car-

ried. The Hospital report was read and the one death discussed. Attention was then turned to the scientific program.

Drs. Lucas and Webb presented a case of appendicitis and malaria in a child. When admitted the patient had a pharyngitis, temperature of 104°, some nausea and vomiting and a white blood count of 13,000. The right abdomen was tender and the spleen palpable and slightly enlarged. There was some stippling of the red blood cells but no malaria was found. The patient was given quinine and the temperature was lowered, the white count reduced to 5,000 and the patient improved. The slight respiratory infection cleared up and the patient made a good recovery.

Drs. Hargrove and Rigby presented a case of xanthoma of the stomach. The patient had had recurring attacks of epigastric pain for three or four years. When admitted she had had a persistent attack for several days with pain, intermittent colicky pains, some nausea and vomiting, a white blood count of 16,000 with 91 per cent polys, a temperature of 99° to 100° and other indications of partial intestinal obstruction. After purgatives, enemata and decompression of the duodenum, the acute symptoms subsided but the patient still showed a marked tenderness over the left epigastrium where a mass the size of a small orange could be felt. The blood count gradually returned to normal, but the mass and the tenderness persisted. Roentgenogram of the stomach showed a normal mucous membrane and no obstruction, but with pressure there was an obliteration of the lumen of the antrum. The remaining gastrointestinal tract showed no defect. The patient was operated upon and a mass was found attached to the anterior surface of the stomach and the anterior abdominal wall. It was reddish brown, about the size of a hen egg, and necrotic in the center. A partial gastric resection was done, together with a posterior gastroenterostomy and the patient made rapid improvement. Sections of the tissue showed involvement of the peritoneum and part of the muscular coat of the stomach, but no involvement of the mucosa. There was a chronic inflammatory change with many xanthoma cells and fat necrosis. The case was discussed by Drs. Anderson, Herold and Mathews.

Dr. Herold introduced the guests. Officers for 1936 were then elected with the following results:  
President..... Dr. R. T. Lucas  
Vice-President..... Dr. C. R. Gowen  
Secretary..... Dr. H. M. Trifon

There being no further business, the meeting adjourned.

J. R. Anderson, M. D.,  
Secretary.

#### TOURO INFIRMARY

The regular meeting of the Medical Staff of

Touro Infirmary was held Wednesday, February 12, 1936, at 8:00 p. m., Dr. C. Jeff Miller, presiding.

The scientific program was as follows:

Dr. John A. Lanford: Clinico-pathological conference, from 8 to 9:00 p. m.

Dr. M. H. Kaplan: Autopsies at Touro during 1935.

Dr. J. D. Rives and Dr. Morris Shushan: Abscess of the falciform ligament.

Dr. Charles Holbrook: Presentation of a case of encephalitis.

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### MERCY HOSPITAL

The regular monthly meeting of the Mercy Hospital staff was held Wednesday, February 5, 1936, with Dr. Geo. Hauser presiding. The paper on Superior Hypogastric Sympathectomy that was to be presented by Dr. Hances was postponed because of the inclement weather conditions and in its stead Dr. Charles Bahn gave an interesting talk on Medical Economics. He discussed the two ways a physician may feel towards the medical economic problem; first, should the doctor allow the patient to contribute what he pleases, or second, should the doctor sell his knowledge to the patient? This interesting talk was discussed by Drs. Zander, Vedrenne, J. E. Brierre, P. A. Phillip, Howles, Upton and Hances.

The scientific program further consisted of the discussion of three deaths. The first case was an interesting one that expired within three days following admission with a diagnosis of acute and chronic cholecystitis with perforation of the gall bladder, cholelithiasis and general peritonitis. This was an inoperable case. The autopsy revealed extensive adhesions involving the hepatic flexure, appendix, gall bladder, omentum, liver and bile ducts—a toxic hepatitis. This case was discussed by Dr. J. E. Brierre.

The second case expired on the seventh day following admission. This was one of cardiac decompensation with general anasarca and ascites. There was no further discussion of this case.

The third case expired nine days following admission, no autopsy was permitted on this case. The diagnosis was arteriosclerotic heart disease with decompensation and chronic hepatitis. There was no further discussion of this case.

Lloyd Hances, M. D.,  
Secretary.

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### FRENCH HOSPITAL

A regular meeting of the French Hospital Staff was called to order Friday, February 14, 1936 with Dr. Strange presiding. The minutes and an

analysis of the hospital records were read by Dr. McCarty.

The deaths that occurred during the previous month were then discussed. The case history of Mrs. A. R. was presented by Dr. Messina and discussed by Dr. Zander, who was of the opinion that this seemed to be a typical case of influenzal bronchopneumonia.

Dr. Ader discussed the case of Master N. P. He stated that many cases of diphtheria and streptococcal infection together were found this season, producing a very severe toxemia. Dr. Howles said that at the Philadelphia Municipal Hospital several years ago, diphtheria cases were quite as severe, but that in the streptococcal sore throat more edema was present. The throats were swabbed with cocaine and adrenalin and often intubation was used, more so in streptococcal than in diphtheritic involvement.

Dr. Zander asked if patient A. R., who died of typhoid fever, had bled to death or had died of perforation. Dr. Rougelot gave the history and explained that the patient probably died as a result of fever, being also weakened from hemorrhage.

The application of Dr. C. C. Mary was presented and passed upon unanimously.

Dr. Howles then presented an interesting paper on the Treatment and Diagnosis of the Superficial Mycoses. He spoke particularly of the ringworm of the body, hands, nails, and groin; accompanying the talk with slides showing the difference between deep and superficial types of infection. The type of treatment best suited is one containing petrolatum, salicylic acid and thymol or iodine for chronic cases and sodium thiosulphate soaks in vesicular and pustular types. Dr. Strange asked if onychomycosis of 50 years duration could be cured. Dr. Howles stated that avulsion of the nail could be tried, along with autogenous vaccine. An interesting point was the illustration of trichophthids, which were lesions (sterile) caused by a sensitivity from a primary focus elsewhere. Dr. Zander gave his appreciation, stating the frequency of the condition in general practice and asked Dr. Howles' opinion of potassium permanganate and antiseptic dyes. Dr. Howles said that potassium permanganate was good as a deodorant in malodorous and in pustular lesions, but it was not as good as sodium thiosulphate. He also stated that Dr. Castellani's carbol fuchsin paint was considered good to dry out vesicular eruptions in the day time, and was useful in large institutions where many cases are to be treated. Dr. Howles said further that Cutter's mixed vaccine was of definite benefit in the pustular types.

R. H. McCarty, M.D.,  
Secretary.



J. T. NIX CLINIC  
NEW ORLEANS

At a meeting held in February, Doctor Manuel Garcia read the following paper:

OVARIAN MALIGNANCY

Ovarian tumors constitute one of the most complex chapters in pathology. There is no agreement as to their identity, their histogenesis, their etiology, or their therapeutic attack. Their clinical development is often obscure, and their mortality rate is at a distinctly somber level. For the student of neoplasms they have great fascination. The present communication deals with two cases of much interest that we have been following for a year.

With ovarian neoplasma there is no sharp dividing line between those that are malignant and those that are benign. For this reason, estimates as to the relative incidence of ovarian malignancy vary widely. Murphy quotes percentages ranging from 7.3 to 24.2. Stout at the Presbyterian Hospital found 5.3% of all female cancer to be ovarian. Lippert is reported to have discovered 941 ovarian tumors among 58,787 female clinic patients of all types, an incidence of 1.6%. Ewing calculates the relative frequency of the different ovarian malignant growths to be as follows: carcinoma, 22%; embryoma, 9.2%; sarcoma, 2.9%; considering all ovarian tumors as 100%.

In consideration of general etiology Ewing states: "It appears that the effective causes of ovarian tumors are quite as obscure as with other organs. Neither predisposing nor exciting factors can be accurately defined, but it may be assumed that chronic hyperemia, exaggerating the natural regenerative processes in the organ, figures in most cases. The studies of histogenesis, on the other hand, indicate that developmental anomalies are essential conditions in the growth of the great majority of ovarian tumors." Heredity has been very vaguely connected with their genesis, and the organs are so sheltered that trauma is an insignificant factor. Taylor sees a possible causative relationship between neoplasms and decreased ovarian function, as shown by their greater frequency at the menopause, and in young women with a congenital underdevelopment of the organs. He quotes, in support of this, a lower fertility and scantier menstruation in younger women with ovarian tumors, but it must be remembered that no age is immune to the development of the tumors. Murphy, in the analysis of the incidence of pregnancies, abortions, and sterility, and of sexual development in his series of cases, envisages a causative hormonal influence.

The identity of the cells that give rise to ovarian tumors has been a point of argument from the time of Virchow. All the epithelial elements of the organ as well as such embryonic structures as the muellerian and wolffian ducts have been con-

sidered as possible sources. Abnormally placed endometrium has also been thought the tissue of origin of some of the carcinomas. According to Ewing the superficial ovarian epithelium has been clearly shown to give rise to the superficial papillomas. Pseudostruma ovarii is derived by invagination of the same structure. Papillary cystomas of the serious type are developed by the same method. Because goblet cells are formed in this epithelium, he ascribes the same origin to pseudomucinous cysts. Glockner, Linnell and Bauer are credited with describing a direct transition from these growths into alveolar and solid carcinomas. A follicular origin, as well as misplacement of the complex embryonic organs already alluded to, can not be excluded. "It is highly probable that tumors of adult type are derived from adult epithelium. The ovulogenic origin of certain atypical adult and embryonal carcinomas, sarcomas, and mixed tumors should be entertained for the ovary as for the testis." (Ewing).

The principal basis for the classification of ovarian neoplasms has been their morphology. But since all sections of a given tumor are not uniform, since metaplasia occurs, identification by this method has proved difficult. Grossly they have been grouped into solid and cystic, papillary and glandular tumors. Every author has created criteria, and evolved a scheme of classification, and this has added complexity to a naturally involved matter. The following grouping was combined from Ewing and Taylor: Malignancies occurring in the ovary are: I. Metastatic, that is, tumors secondarily involving the ovary, from a focus elsewhere in the genital tract, or any structure of the body. A specific type in this category are Krukenberg tumors, which as a rule are primary in the gastro-intestinal tract. II. Primary, which are subdivided into; 1. Sarcomatous, originating in the ovarian stroma. 2. Miscellaneous, which include hypernephroma, endothelioma, chorioepithelioma, and luteoma. 3. Teratomas, ranging from adult teratoids to malignant embryomas. 4. Papillary cystomas, either of the serous or of the pseudomucinous types. Neither is very malignant in the vast majority of cases, but they follow an unpredictable course and merge into the 5. Adenocarcinoma. 6. Carcinomas, usually of three types, medullary, alveolar, or scirrhous; but two unusual groups are recognized, the seminomas, similar to the testicular tumors, and the granulosa cell carcinomas, of a relatively benign course.

The clinical course of ovarian malignancies varies widely, and the symptomatology and signs are extensive. Unfortunately no pathognomonic signs exist. In Murphy's series the prediagnostic length of symptoms averaged from eleven to fifteen months. They were most pronounced in the carcinoma group. Abdominal pain and enlarge-

ment were the chief complaints in all groups. Menstrual irregularities with excessive or diminished flow are not so frequent as many of the patients are beyond menopause. Periodic post-menopausal bleeding should arouse the suspicion of a granulosa cell tumor. Precocious puberty may be induced in young girls by the same tumor.

Papillary cystadenomas are often referred to as semi-malignant tumors, because of their indolent course, which causes only pressure symptoms as long as the cyst remains intact. Should this rupture, however, extensive bleeding of the peritoneum, with chronic ascites, occurs. But sometimes such tumors have true metastasizing powers, and their microscopic structure is malignant. To this group belongs the following case:

Case 1. N. B., white female, aged 40, reported at the Clinic with a history of vesical trouble of four weeks' duration. Suddenly she had developed an inability to control the urine, which gradually had grown worse and forced her to wear a pad. With this, there was some enlargement of the abdomen and some pain. Menses had been irregular for some five or six years and there was occasionally slight leukorrhea. Past history disclosed measles, pertussis, German measles in childhood; typhoid at 14; appendectomy in 1918; erysipelas of the face in 1920; tonsillectomy in 1929. No familial malignant disease. On examination the patient was found to be a middle aged woman of low stature with a pronounced scoliosis (probably due to old tuberculous spondylitis), and a marked congenital deformity of the feet, which were at least twice the normal size in length and bulk, with an abnormal configuration of the toes. The thyroid was enlarged slightly. The lower half of the abdomen, especially on the right side, was enlarged by a tender, tense globular mass of a cystic consistency. Hemoglobin was 60%. The blood, the urine, and the kidney function test were normal. Radiographic examination of the chest showed no lesions in the lungs, but the heart was found moderately enlarged. Laparotomy was done by Dr. James T. Nix on 4/2/35. The right ovary was removed; it contained a multilocular cyst tumor, found to be a papilocystadenoma. The cells were mostly of the adult type but many mitotic figures were present. The patient recovered rapidly from the intervention and was discharged from the hospital after the administration of 1500 r units to the pelvis through each of two portals, one anterior and one posterior. Radiation has been continued at bi-monthly intervals and the total dose now is 5800 r units to the entire pelvis using 180 KV  $\frac{1}{2}$  mm. Cu plus 1 mm. Al filter, 50 Cu S.T.D., 4 m.a., 10 by 15 Cu portals. She is doing very well and there is no evidence of recurrence, or metastasis.

Since there is a long symptomless period, early

diagnosis can be hoped for only when periodic pelvic examinations are practiced. All ovarian cysts are potentially malignant and should be removed, especially in older women. Exploratory operation is indicated even in the presence of ascites, for extirpation or considerable palliation may be obtained. Bilateral oophorectomy is usually indicated in proved malignancies, save in teratomas of young women and in serous cysts, which tend to be unilateral. Hysterectomy does not seem to be of help, but should be performed if the patient's condition permits. Post-operative radiation should not be omitted, either externally with roentgen rays or by implantation in the vagina, especially in cases where general factors contra-indicate surgery. Differences in radio-sensitivity exist. The granulosa cell tumors, and carcinomas with a primitive morphology are most susceptible, while the medullary and alveolar carcinomas are relatively resistant. (Stewart).

The following case belongs to the teratoma group:

Case 2. C. D. G., white female, aged 14 years, appeared at the Clinic on September 24, 1934, complaining of abdominal pains of more than a year in duration. These were of a crampy type, irregular in appearance, sometimes associated with vomiting. On February 25, 1932, the appendix had been removed, and prior to that she had had measles, diphtheria, varicella and mumps. There was no history of familial malignancy, no trauma, and menstruation had not begun. On examination the child was found to be markedly underweight, weighing 59 pounds as compared to 81 pounds, the normal for her age and height, (52 $\frac{1}{4}$  in.). There was evidence of anemia, and dental caries and hypertrophic diseased tonsils were present. There was a palpable tumor mass in the left lower quadrant of the abdomen, measuring about eight by three centimeters. It seemed to rise from the pelvis, was slightly movable, reached the mid-line and its upper border was about two fingers' breadth below the umbilicus. The urine showed nothing, but the blood exhibited anisocytosis, polikilocytosis, and eosinophilia, though the total white and red counts were normal. Hemoglobin was 65 per cent, and the P. S. P. 75 per cent in two hours. Radiographic examination of the chest was negative. A tentative diagnosis of ovarian sarcoma was made and Doctor J. T. Nix did a laparotomy on September 29, 1934. The left ovary was found replaced by an irregularly cylindrical hard mass about 13 cm. in length by 7 cm. in width by 5 cm. in thickness. It had a distinct pedicle, and this was divided, without disturbing any other organ. Convalescence was uneventful. On section, the tumor showed small areas of liquefaction, with mottled solid areas firm to gritty in consistency. The microscopic diagnosis was embryoma of the ovary. Immediate post-operative

radiation consisted in administration of 1600 roentgens through an anterior and a posterior portal. At intervals of one to three months radiation has been repeated, the patient having received an additional 3375 roentgens to the pelvis up to the present time. It was feared that this radiation would suffice to destroy all ovarian function, but the child is going through an apparently normal puberty and now weighs 92 pounds. There is no evidence of activity.

Modern views hold that teratomas originate from the sex cell or ovum. The tridermal character of these growths exacts a totipotent cell as a source. This can occur only in two ways,—from the isolated blastomere postulated by Marchand and Bonnet, and from the primitive unfertilized ovum. Which is correct remains to be proved. These solid embryonal tumors develop rapidly and are malignant from the first. They soon attain a large size, penetrate through their capsule, and spread over the pelvis with the development of ascites. Secondary growths develop in the liver, the lungs, and other structures. The solid malignant tumors are usually fatal, directly or from operation or recurrence, yet when the tumor is circumscribed, or pedunculated and early, it may be successfully removed. Neuhaser estimates the cured cases at 27 per cent. (Ewing). We are hopeful that the case reported will fall within this range.

#### SUMMARY AND CONCLUSION

Primary ovarian malignancies exhibit wide morphologic and clinical manifestations. Etiologic and histogenic factors remain largely obscure, but developmental anomalies are essential conditions for the growth of a large portion of them. Since there is a long asymptomatic period, increase in early diagnosis must depend on routine periodic pelvic examinations. All ovarian cysts are potentially malignant and should be removed, especially in older women. Two cases are reported in which a combination of surgery and radiation has yielded good results thus far.

#### BIBLIOGRAPHY

Hertzler, A. E.: *Surgical Pathology of the Female Generative Organs*, pp. 120-126, 1932.

Meigs, J. V.: *Tumors of the Female Pelvic Organs*, pp. 292-297, 1934.

Scheffey, M.: *Am. J. Obst. & Gyn.* 9, 490-502 Ap., 1925.

Ewing, James: *Neoplastic Diseases*, pp. 624-666, 1928.

Keene, Pancoast & Pendergrass: *J. A. M. A.*, 89: 1053-1055, 1927.

Norris and Murphy: *Am. J. Obst. & Gyn.* 23:833, 1932.

Shaw, W.: *J. Obst. & Gyn. Brit. Emp.* 40: 257-272, 1933.

Ewing, F. W.: *Arch. Surg.* 27:979-1064, 1933.

Taylor, H. C. Jr.: *S. G. & O.*, 48: 204-230, 1929.

Witherspoon, J. T.: *Am. J. Obst. & Gyn.* 31: 173-177, 1936.

Murphy, W. T.: *S. G. & O.* 61: 286-305, 1935.

#### OSCAR ALLEN TUMOR CLINIC

#### CHARITY HOSPITAL

#### New Orleans

The scientific meeting of February was called by Doctor James T. Nix, director. The essayist was Doctor Jack S. George, who presented the following paper.

#### TREATMENT OF CARCINOMA OF CERVIX BY USE OF RADIUM AND DEEP X-RAY THERAPY

Since our recognition of carcinoma of the cervix womankind has dreaded its occurrence.

With the advent of radium we became enthusiastic, however, and in a short time it became obvious that this was not the entire solution, and, in fact, our percentage of cures over five year periods was increased, but very slightly. The next refinement came with the use of deep roentgen ray therapy and radium. This method has increased the number of five year cures but still we cannot claim over 22 or 23 per cent cures in most clinics. Accordingly the following table was compiled by Taylor on the curability by radium of the different histological types of cervical carcinoma taken from four American Clinics and five German Clinics:

	Grade I Prickle cell		Grade II Transitional Plexiform		Grade III Spindle cell Anaplastic		Adenocarcinoma	
	Adult cases	Ripe cures	cases	cures	cases	cures	cases	cures
American Literature	188	22%	294	24%	136	27%	57	23%
German Literature	132	25%	201	23%	205	25%	114	22%
Total 1327	320	23%	495	23%	341	26%	171	22%



In the light of more recent work it would seem that by treating the cases with larger doses and more thoroughly, the percentage of five year cures has been increased.

We have in part adopted the plan of Healy as to the treatment of these cases.

Inasmuch as we believe the development of the parametrium to be of prime importance we have been attempting to irradiate the parametrium with deep therapy prior to the application of radium. In this regard we have been using two plans, first dividing the pelvis into 4 quadrants, two anterior and two posterior, namely right and left. The second plan is as above with the addition of two lateral portals. We have felt that by the application of deep roentgen ray therapy to these areas, the ray being directed at right angle to the body surface and increasing the skin target distance, we can decrease the number of skin reactions. The treatments, to be effective, should be given daily and to a total dosage of 8000 r units to 4 portals or 12,000 r units to 6 portals. By increasing the skin target distance we hope to increase the penetration without the skin reactions we have had previously.

It has been shown that the radiation given in this manner, not directed at the cervix, will, by back scatter, accumulate a rather large dosage at the region of the cervix.

By using our deep therapy first we have found that the sloughing necrotic areas are decreased in size and with the use of douches we feel we have cut down the amount of infection. In this manner we feel that the application of radium is simplified and that the dangers of carrying infection down the uterine cavity are decreased. A word of warning should be given however; each patient receiving deep therapy is an individual case and cannot be given treatment by routine procedures, i.e. each patient during her course of deep roentgen ray therapy should be observed at bi-weekly intervals and her systemic reaction noted, as we have noticed patients developing considerable toxemia due to the absorption of toxic products resulting from the breaking down of cancerous tissue by the treatment.

We also feel that by this method of treatment we have decreased the incidence and severity of rectal and bladder complications.

Immediately after the patient has received her course of deep roentgen ray therapy she should receive an application of radium. This is our first attempt at the primary cervical lesion. We also feel that radium should be applied but once and any lesion requiring re-application has undoubtedly received inadequate primary application. Thus we feel that at least a dosage of 3600 mgm. hours of radium be given, and if possible more; care being taken to limit the application of radium to thirty hours or less. With this large dose of radium it is obvious that more than ordinary care must be taken in the application and especially in the packing off of bladder and rectum. In many of our far advanced cases we find considerable difficulty in applying a pack large enough to remove the bladder and rectum from the danger area. This is due to the infiltration of bladder and rectum, but all too often it is due to the previous treatment with radium and resulting vaginal adhesions due to the packing.

In many centers the dosage of radium is nearer 5000 mgm. hours and even then they have cases that must have reapplication, though usually these are metastatic nodules within the vagina.

In summarizing we believe the percentage of five year cures of carcinoma of the cervix can be increased by:

1. Earlier diagnosis of cervical cancer.
2. Energetic and thorough treatment by means of deep x-ray therapy first to the parametrium and followed by large doses of radium to the cervical lesion.
3. The use of deep roentgen ray therapy in small repeated dosages rather than single large doses.

#### BIBLIOGRAPHY

- Taylor, H. C., Jr.: Fact about roentgen ray and radium therapy. *Bull. New York Acad. Med.*, 11: 368, 1935.
- Miller, C. J.: Cervical Cancer: curability. *Surg. Gynec. & Obst.*, 60: 470, 1935.
- Healy, W. P.: Cervical Cancer; radiation therapy. *Canad. M. A. J.*, 32: 647, 1935.
- Chambers, H.: Cervical Cancer: results of radiotherapy. *Lancet*, 1: 606, 1935.
- Healy, W. P. & Arneson, A. M.: Cervical Cancer: radiation treatment. *Am. J. Roentgenol.*, 32: 646, 1935.

## TRANSACTIONS OF ORLEANS PARISH MEDICAL SOCIETY

## CALENDAR

MARCH 2 Eye, Ear, Nose and Throat Hospital Staff, 8 P. M.

MARCH 4 Clinico-Pathological Conference, Touro Infirmary, 11:15 A. M. to 12:15 P. M.

MARCH 4 Board of Governors, First and Second District Dental Society, 8 P. M.

MARCH 4 Mercy Hospital Staff, 8 P. M.

MARCH 6 Pathological Conference, Hotel Dieu, 11 A. M. to 12 Noon.

MARCH 9 ORLEANS PARISH MEDICAL SOCIETY meets jointly with the Southeastern Surgical Congress, Roosevelt Hotel, 8 P. M.

MARCH 10 Southeastern Surgical Congress.

MARCH 11—Southeastern Surgical Congress.

MARCH 11 New Orleans Gynecological and Obstetrical Society meets jointly with the Orleans Parish Medical Society, 8 P. M.

MARCH 11 Touro Infirmary Staff, 8 P. M.

MARCH 13 Pathological Conference, Hotel Dieu, 11 A. M. to 12 Noon.

MARCH 13 French Hospital Staff, 8 P. M.

MARCH 16 Hotel Dieu Staff, 8 P. M.

MARCH 17 Charity Hospital Medical Staff, 8 P. M.

MARCH 18 Clinico-Pathological Conference, Touro Infirmary, 11:15 A. M. to 12:15 P. M.

MARCH 18 Charity Hospital Surgical Staff, 8 P. M.

MARCH 18 First and Second District Dental Society, 8 P. M.

MARCH 19 Eye, Ear, Nose and Throat Club, 8 P. M.

MARCH 20 Pathological Conference, Hotel Dieu, 11 A. M. to 12 Noon.

MARCH 20 I. C. R. R. Hospital Staff, 12 Noon.

MARCH 23—ORLEANS PARISH MEDICAL SOCIETY meets jointly with the American Congress on Physical Therapy, 8 P. M.

MARCH 24 Baptist Hospital Staff, 8 P. M.

MARCH 25 Clinico-Pathological Conference, Touro-Infirmary, 11:15 A. M. to 12:15 P. M.

MARCH 27 Pathological Conference, Hotel Dieu, 11 A. M. to 12 Noon.

During the month of February, besides the regular meeting of the Board of Directors, the Society held one regular Scientific Meeting on February 10. The following program was presented: Presentation of an Interesting Case of Hyatid Cyst of the Uterus. Only case on record.

By:.....Dr. Hilliard E. Miller  
An Analysis of the Touro Infirmary's Obstetrical Service for the Year 1935 Based on a New Record System.

By:.....Drs. Walter E. Levy and Harry Meyer

The Value of the X-Ray in the Interpretation of Gastro-Intestinal Disease.

By.....Drs. A. L. Levin and Morris Shushan

The meeting scheduled for February 24 was dispensed with because of confliction with Carnival activities.

The Secretary's office has been very busy during the past month sending out communications to all civic organizations, luncheon clubs and every firm operating a motor vehicle asking cooperation in the Safety Campaign sponsored by the Society. To date we have received pledges of cooperation from all clubs and many business organizations. The members are urged to give their fullest support to this campaign.

The first issue of the Bulletin of the Orleans Parish Medical Society was issued to the membership during February. We feel that this Bulletin will bring the membership closer together. The members are urged to send in news items for publication.

The following members were elected to Active Membership: Drs. Benj. J. Carlton, Jr., A. J. Hockett and Louis Ochs, Jr. These men were introduced to the Society at the regular meeting held February 10.

## TREASURER'S REPORT

ACTUAL BOOK BALANCE 12/31/35.....\$ 743.69  
January Credits: .....\$1,580.74

\$2,324.43

January Expenditures: .....\$ 999.20

ACTUAL BOOK BALANCE 1/30/36 .....\$1,325.23

## LIBRARIAN'S REPORT

During January, 826 books and journals were circulated to doctors or more than 1½ to each member of the Society. In addition figures do not include the great use of books and journals within the Reading Rooms.

One hundred and forty-six volumes have been added to the Library. Of these 92 were received by binding, 27 from the New Orleans Medical and Surgical Journal, 26 by gift and one by purchase. New titles of recent date are listed below.

On request of physicians, members of the staff have collected material on the following subjects during January:

Use of oxygen subcutaneously and intravenously.

Use of histamine in muscular weakness.

Hospital libraries.  
 Diphtheric meningitis.  
 Ileocecal tuberculosis.  
 Etiology of agranulocytosis with reference to benzol.  
 Stability and potentiality of ascorbic acid.  
 Amputation of penis for elephantiasis.  
 Carcinoma of lungs.  
 Sex hygiene in children.  
 Glomus.  
 Ophiasis.  
 Personal bibliography of Dr. Mary Lapham.

#### NEW BOOKS—JANUARY

American Surgical Association—Transactions. 1935.

Association of Life Insurance Presidents—Proceedings. 1935.

American Pediatric Association—Transactions. 1935.

Rockefeller Foundation—Annual Report. 1934.

U. S.—Surgeon-General's Office—Annual Report. 1935.

Petersen, W. F.—Patient and the Weather. v. 1 pt. 1. 1935.

Practitioner's Library of Medicine and Surgery. v. 9. 1936.

Association pour la documentation photographique et cinematographique dans les sciences. Compt. rend. 1934.

Wechsler, I. S.—Textbook of Clinical Neurology. 1935.

Mustard, H. S.—Introduction to Public Health. 1935.

Thoms, Herbert—Classical Contributions to Obstetrics and Gynecology. 1935.

McGregor, A. L.—Synopsis to Surgical Anatomy. 1934.

Weiss, Samuel—Diseases of the Liver. 1935.  
 Shepard, Katherine—Textbook of Attendant Nursing. 1935.

Pemberton, Ralph—Arthritis and Rheumatoid Conditions. 1935.

Bridges, M. A.—Food and Beverage Analysis. 1935.

Imperator, C. J.—Diseases of Nose and Throat. 1935.

Berglund, Hilding, ed.—Kidney in Health and Disease. 1935.

Rice, T. B.—Textbook of Bacteriology. 1935.

Warbasse, J. P.—Doctor and the Public. 1935.

Stone, A. and Stone, Hannah—Marriage Manual. 1935.

Perla, David—Spleen and Resistance. 1935.

Weyl, Charles—Apparatus and Technique for Roentgenography of the Chest. 1936.

Morton, D. J.—Human Foot. 1935.

Bubis, J. L.—Puerperal Gynecology. 1935.

American Pharmaceutical Association—National Formulary. 1935.

Rogers, G. H.—New Pathways for Children with Cerebral Palsy. 1935.

Havens, L. C.—Bacteriology of Typhoid, Salmonella, etc. 1935.

Eusterman, G. B.—Stomach and Duodenum. 1935.

Morris, R. T.—50 years a Surgeon. 1935.

Gladstone, S. A.—Cardiac Output and Arterial Hypertension. 1935.

Metropolitan Life Insurance Company—Mortality from External Causes. 1935.

McKinley, E. B.—A Geography of Disease. 1935.

Gilbert C. Anderson, M. D.  
 Secretary

## LOUISIANA STATE MEDICAL SOCIETY NEWS

### A LETTER FROM THE PRESIDENT

To Members of Louisiana State Medical Society:

May I call your attention to Article Two of the Charter of our State Society. This states clearly the object and purposes of the State Society, but none of these can be accomplished without much work and a continued concerted effort, not only by your officers but by each member individually and collectively.

At this particular time when so many attacks are being made on organized medicine and the various would-be charitable foundations and new 'isms are being brought into prominence, we need to be reborn and to have a real organized medicine. We need to think and to clear our eyes in order to see more clearly just what confronts us. Above all, we need to and must swell our ranks

if we are to continue occupying the position we would like to occupy as organized medicine. The need the past year for numerical strength was clearly demonstrated. May I not call upon each of you to lend your aid and support in getting any eligible doctor whom you may know to join with us. There are many who have simply failed to renew their membership, while there are others who have never been members of the State Society. Explain to them that a large measure of protection and support they now enjoy is due to the efforts of organized medicine. Ask him to join with us and then criticize us. Tell him that we will welcome new ideas and appreciate his support in order to serve him better. Impress upon him that he needs us and we need him. Yes—the time is here for us to think and to swell our ranks.



Our Secretary-Treasurer, Dr. P. T. Talbot is, and has been, very active as usual to increase our membership. He fully appreciates the importance of this, not only from the standpoint of a successful State Society, but also from the standpoint of General Manager of the New Orleans Medical and Surgical Journal. Can we not help him?

Fraternally and Cordially,

Courtland P. Gray, M. D., President.  
Monroe, Feb. 13, 1936.

#### INVITATION TO THE LOUISIANA STATE MEDICAL SOCIETY MEETING IN LAKE CHARLES

The annual meeting of the Louisiana State Medical Society will be held in Lake Charles, La. on April 27-29. The Calcasieu Parish Medical Society and the Sisters and Staff of the St. Patrick's Sanitarium at Lake Charles will be the hosts on this occasion. They take this means of inviting all the members of the State Medical Society to be their guests for these spring days. They promise, besides the routine business and the many interesting features of the convention, all the entertainment that the city can supply. Boat rides on beautiful Lake Charles are being planned. On Wednesday night there will be an old fashioned barbecue at the Country Club. They promise all the keg beer the entire membership and guests can consume. Following the barbecue will be a dance at the club.

There will be golf for those who want golf, with a tournament for those who wish to participate. And sight seeing to the oil fields, the Mathieson Alkali Works, the rice mills and various other local points of interest is all being planned now for the entertainment of the guests.

The city of Lake Charles hopes to make this the largest and best meeting ever held. They have guaranteed everything in the city to be at the disposal of the members of the Society, from the keys of the city to the beds in their homes.

Headquarters for the La. State Medical Society will be at the Charleston Hotel and for the Auxiliaries at the Majestic Hotel. Reservations may be made right now for these three important days. The program for the convention is now in the making and a full program will be printed in the April issue. The House of Delegates will meet on Monday. The Surgical Section will have a round table discussion at the noon hour. There will be a Public Health meeting on Monday night, with the Past President's Dinner just preceding this. Names of speakers are not yet ready to be announced, but will be carried in the next issue.

Dr. J. G. Martin of Lake Charles, who is in charge of scientific exhibits, invites all who may have exhibits of interest to communicate with him in Lake Charles. He wishes to use as many exhibits of interest as possible. All groups, indi-

viduals, and organizations are included in this invitation.

For information regarding the meeting, anyone may write Dr. R. P. Howell of Lake Charles, who is in charge of arrangements and general chairman in Lake Charles.

Lake Charles is one of the most beautiful and interesting cities in the South. The city is preparing to entertain from 500 to 700 guests, and many people are planning to go to the convention to visit in Southwest Louisiana and see what it really has to offer. The Association of Commerce and the city officials join with the Calcasieu Medical Society and the Sisters and Staff of St. Patrick's Sanitarium in inviting the Louisiana State Medical Society to Lake Charles.

Remember April 27, 28, and 29! Mark your calendars accordingly! *See you in Lake Charles!!*

#### SHREVEPORT MEDICAL SOCIETY

The regular meeting of the Shreveport Medical Society was called to order February 4 by the President with 29 members and 3 guests present. The minutes of the previous regular and committee meetings were read and adopted.

Treasurer's Report: The Treasurer reported 84 members with 1936 dues paid and a balance on hand of \$1137.44.

Committee Reports: The Committee on the application of Dr. R. E. Corkern for membership reported favorably.

Scientific Program: Dr. P. R. Gilmer presented: A Short Review of the Present Methods Used in the Treatment of Pulmonary Tuberculosis. He pointed out that the basic treatments of rest, sunshine, and diet, had not been replaced but merely supplemented by the newer methods of therapy, the simplest of these methods being pneumothorax, which is very favorable providing adhesions do not prohibit collapsing the lung. The interruption of the phrenic nerve, with resulting diaphragmatic paralysis, is of value in relaxing certain adhesions and putting the lung at rest. Pneumolysis, at times, is of value in severing adhesions which prevent successful pneumothorax. If these procedures fail, one has recourse to several procedures, the principal one being thoracoplasty. Dr. Gilmer illustrated his presentation with lantern slides of chest films, illustrating the indications for and results of the several types of therapy discussed. Dr. Heard, in presenting the technical phases of the surgery involved, pointed out that surgery does two things; first, putting the lung at rest, and second, closing cavities. Phrenic nerve interruption is primarily of value in resting the lung, thoracoplasty mainly of value in closing cavities. While other procedures are used, these two are the most frequently utilized surgical procedures. In the discussion, Dr. Gowen, after presenting charts of lung structures illustrating the

modes of tuberculous infection, presented films illustrating the use of pneumothorax, phrenic nerve interruption and thoracoplasty.

Dr. Rigby presented a case report of ruptured diaphragm with repair. A white woman, aged 22 years, had presented herself with a history of sub-sternal pain, dyspepsia and other vague symptoms. The history revealed a severe trauma several years previously. The exact diagnosis had been discovered at an exploratory laparotomy for "acute abdomen", the result of incarceration of the hernia. Following a brief review of the anatomy, etiology, complications, and types of treatment, Dr. Rigby outlined the operative therapy in this case, which had resulted in apparent cure. In the discussion, Dr. J. A. Hendrick pointed out the difficulty in diagnosis, both clinically and by the roentgen ray. Dr. Heard expressed himself in favor of temporary paralysis of the phrenic nerve to permit closure of the defect. Dr. Boyce reported a traumatic case which he had repaired several years previously, and Dr. Webb mentioned two cases of congenital hernia which he had seen.

**Unfinished Business:** By unanimous vote, the usual procedure was suspended, and Dr. Corkern was elected to membership by open ballot. The President administered the oath.

**New Business:** Dr. Gorton introduced a resolution to the effect that the Society endorse and cooperate in the conducting of a diphtheria immunization campaign similar to the one conducted in 1935. This resolution was unanimously adopted. Dr. Sandidge asked expression from the Society on the proposal of the Caddo Parish Health Unit and the School Physician carrying out the Schick test in certain schools to determine the degree of immunity to diphtheria. Dr. Rigby introduced a resolution that the Public Health and Legislative Committee have full authority to cooperate with Dr. Sandidge in carrying out whatever Schick testing he deemed advisable. This motion was duly seconded and carried.

Paul D. Abramson, M. D., Secretary.

#### BI-PARISH MEDICAL SOCIETY

Bi-Parish Medical Society met in the East Louisiana State Hospital dining room. After an excellent dinner, the Society met in the Staff room for a scientific program.

Drs. A. S. Hamilton and Chaille Jamison read instructive papers on—"Common Foot Diseases" and "Acute Vascular Failure in Common Medical Diseases." Both papers were discussed favorably by physicians present. A vote of thanks was extended to Drs. Hamilton and Jamison for the presentation of their papers. All visiting physicians were elected honorary members of our Society.

The following members were present:

Drs. L. F. Loria, Cecil Loria, L. J. Williams, C. C. Toler, T. H. Pargen, Rhett McMahon, G. L.

Odom, W. J. Roberts, E. M. Robards, N. F. Stafford, S. L. Farring, S. L. Shaw, Chaille Jamison, J. J. Ayo, A. S. Hamilton, C. S. Miller, A. S. Tombs, Jr., and E. M. Toler.

The guests included:

Miss Edna E. Maxwell, Miss Dorothy Robinson, Miss Imogene Dyer, Miss Gracie Meadows, Miss Hermine Tate, Mrs. S. L. Shaw, Mrs. W. J. Roberts, Mrs. Sidney Bowden, Mrs. T. H. Pargen, Mrs. J. J. Ayo.

Society adjourned to meet in East Louisiana State Hospital the first Wednesday in April, at 7:30 P. M.

J. J. Ayo, President.

E. M. Toler, Secretary.

#### FOURTH DISTRICT MEDICAL SOCIETY

The Fourth District Medical Society will meet on Tuesday, March 3, at the Charity Hospital, Shreveport. The scientific program, which will be preceded by a dinner at the hospital from 7 to 8 p. m. is as follows:

Remarks—by Dr. C. P. Gray, Sr., President Louisiana State Medical Society.

Technic and Indications for Skin Grafting—Dr. V. P. Blair, St. Louis, Mo.

To Open Discussion—Dr. Richard Brown, Shreveport, Louisiana.

Recent Trend in the Treatment of Malaria—Dr. J. P. Sanders, Caspiana, Louisiana.

To Open Discussion—Dr. M. D. Hargrove, Shreveport, Louisiana.

#### BULLETIN OF THE ORLEANS PARISH MEDICAL SOCIETY

The Orleans Parish Medical Society, under date of February 10, issued their first bulletin. This is a neat, well gotten up pamphlet of eight pages which contains the calendar for the month, a few editorials and editorial comments, the program of the scientific meetings and news notes about physicians. It also contains a report of communicable diseases of the city of New Orleans. The bulletin is under the editorial management of Dr. Robert A. Strong and with him as assistants are Dr. Elizabeth Bass and Dr. Val H. Fuchs. The Parish Society is to be commended, not only on the appearance of the bulletin but on the material contained therein.

#### WILL ROGERS MEMORIAL FOUNDATION

The Will Rogers Memorial Foundation is to exist in perpetuity and to be administered by a Board of Trustees. It will own no real estate and have no interest financially in property. The income of the fund will be devoted solely to maintaining children in existing Preventoria. Such Preventoria exist in 18 States; Florida with 2, Georgia with 1 and Tennessee with 1, are the only Southern States that have Preventoria where chil-

dren considered to be pre-tuberculous or to have juvenile tuberculosis may be institutionalized for a period of time.

It is unfortunate that the Preventorium formerly in Louisiana had to close on account of lack of funds. Were it still open it would be possible that arrangements could be made with the Will Rogers Memorial Foundation for assistance in maintenance.

#### NEWS ITEMS

The following former Tulane students of recent graduation are Fellows at the Mayo Clinic, Rochester, Minnesota. From the class of 1930—Charles Ward, John G. Menville and Warren Herbert; from the class of 1932—Grace Goldsmith, A. J. Herzog and T. J. Fatherree; from the class of 1933—S. J. Campbell and from the class of 1934—S. B. Lovelady.

Surgeon O. E. Denny is relieved from duty at Ellis Island, N. Y., and directed to proceed to New Orleans, La. and report to the medical officer in charge at the U. S. Quarantine Station for duty.

Passed Assistant Surgeon G. A. Abbott, upon the arrival of Surgeon W. L. Smith, is relieved from duty at the U. S. Marine Hospital, New Orleans, La., and directed to report to the Medical Officer in Charge of the U. S. Marine Hospital at Stapleton, N. Y., for assignment to duty.

#### TENNESSEE STATE MEDICAL MEETING

The one hundred third annual meeting of the Tennessee State Medical Association will be held in Memphis, April 14, 15, 16, 1936. Members of the Louisiana Medical Society are invited to attend all of the sessions. No registration fee is charged for guests or members. All visiting doctors are given the privilege of the floor in the discussion of all papers.

A strong program is being arranged and will be issued early in April. Copy of the program will be sent to those who request it from Dr. H. H. Shoulders, Secretary, Tennessee State Medical Association, 508 Doctors Building, Nashville, Tennessee.

#### DR. RAYMOND TO HEAD SEARLE RESEARCH

Announcement has just been made by G. D. Searle & Co., Chicago, of the appointment of Dr. Albert L. Raymond as Director of their Research Laboratories.

To take this Searle appointment, Dr. Raymond resigns from the Rockefeller Institute of Medical Research, with which he has been connected for the past nine years, the last seven of which he was an associate of Dr. Levene.

For two years he was National Research fellow, working on problems connected with the biological mechanism of carbohydrate degradation.

Dr. Raymond is a Californian and gained his Ph. D. at the California Institute of Technology, Pasadena, in 1925. Afterwards he spent three years part-time teaching at California Institute of Technology and at the University of California.

He is a member of the American Chemical Society and the American Society of Biological Chemists.

#### AMERICAN CONGRESS OF PHYSICAL THERAPY

The Spring Session of the Southern Section of the American Congress of Physical Therapy will be held on March 23 and 24, 1936, in the auditorium of the Medical School of Tulane University of Louisiana. The American Congress of Physical Therapy is endeavoring to stimulate an increased interest in physical therapy throughout the South, and in furtherance of this plan this scientific and clinical session is being held. An unusually attractive program has been arranged, the morning sessions starting promptly at 9:00 and the afternoon sessions at 2:00. The evening meeting will be conducted jointly with the Orleans Parish Medical Society. Members of the medical profession, hospital workers, technicians properly vouched for and medical students, are cordially invited to attend all the sessions without registration fee. Clinics will be held on Tuesday, March 24, and the specific subjects and time will be given in the official program. The co-operation of the profession generally throughout the Southern States and of the Orleans Medical Society in particular, is urgently solicited for the success of this Spring Session. The program is as follows:

##### Physical Therapy in Lower Back Injuries

Frank H. Walke, M. D.,

Staff, Schumpert Memorial Hospital; Highland Sanitarium, Shreveport, La.

##### Antirachitic Properties of Irradiated Evaporated Milk

Robert A. Strong, M. D.,

Professor of Pediatrics, Tulane University School of Medicine, New Orleans.

##### Radiathermy in Eye, Nose and Throat Conditions

Henry L. Hilgartner, Jr., M. D.,

Texas School for Blind, Austin, Texas.

##### Newer Aspects of Ionization Therapy in Perennial Nasal Allergic Disorders

A. R. Hollender, M. D.,

Associate in Laryngology, Rhinology and Otolaryngology, University of Illinois College of Medicine, Chicago.

##### Present Status and Technique of Fever Therapy

Upton W. Giles, M. D.,

Professor of Physical Therapy, Louisiana State University, New Orleans.

##### The Physiology of Hyperpyrexia

Roy H. Turner, M. D.,

Assistant Professor of Experimental Medicine, Tulane University of Louisiana, New Orleans.



Fever Therapy in Gonorrheal Arthritis and Epididymitis

J. A. Trautman, M. D.,

Passed Assistant-Surgeon, United States Public Health Service, United States Marine Hospital, New Orleans.

Hyperpyrexia in Bronchial Asthma

Kenneth Phillips, M. D.,  
Miami, Florida.

Physical Measures in Traumatic Neurosis, Hysteria and Functional Nerve Conditions

Nathan H. Polmer, M. D.,

Assistant Professor of Clinical Medicine, Graduate School of Medicine, Tulane University of Louisiana, New Orleans.

Physical Therapy in Relation to Arthritis

John S. Coulter, M. D.,

Associate Professor of Physical Therapy, Northwestern University Medical School; Member, Council on Physical Therapy, American Medical Association, Chicago.

Effect of Carbon Arc Radiation on Blood Pressure and Cardiac Output

Henry Laurens, Ph. D.,

Professor of Physiology, Tulane University School of Medicine, New Orleans.

The Generation of High Frequency Currents, Discussion of Concepts, Units and Radio Circuits as Applied to Short Wave Diathermy

Howard A. Carter, B. S., in M. E.,

Secretary, Council on Physical Therapy, American Medical Association, Chicago.

#### TUESDAY, MARCH 24 CLINICS

9 to 12 A. M. Department Physical Therapy, Touro Infirmary.

Nathan H. Polmer, M. D.,

Assistant Professor of Clinical Medicine, Graduate School of Medicine, Tulane University of Louisiana, New Orleans

1 to 4 P. M. Department of Physical Therapy, Louisiana State University with the cooperation of Gynecological and Dermatological Staffs.

Upton W. Giles, M. D.,

Professor of Physical Therapy, Louisiana State University, New Orleans.

Dr. Richard Kovacs, 1100 Park Ave., New York, is Executive of the American Committee.

#### VENEREAL DISEASE INFORMATION

This is a monthly publication prepared by the U. S. Public Health Service for distribution among the medical profession throughout the United States. It measures approximately 6 by 9 inches and ranges in size from 25 to 75 pages.

It is the purpose of the Public Health Service in issuing this publication to provide in condensed form a monthly summary of the scientific developments in the diagnosis, treatment, and control of syphilis and gonorrhea. More than three hundred American and foreign journals are reviewed for this work. Abstracts are made of articles describing laboratory, pathologic, and clinical work in the field of venereal diseases.

The most important literature on every phase of the subject is presented in the form of brief abstracts that are easily read. An index for the year is published with the December issue.

During the past year thousands of physicians found this publication useful in enabling them to keep abreast with developments in venereal disease work.

The cost of this publication is only fifty cents per annum, payable in advance to the Superintendent of Documents, Government Printing Office, Washington, D. C. It is desired to remind the reader that this nominal charge represents only a very small portion of the total expense of preparation, the journal being a contribution of the Public Health Service in its program with State and local health departments directed against the venereal diseases. If you wish to secure the valuable service which this monthly magazine provides, send fifty cents to the Superintendent of Documents, Government Printing Office, Washington, D. C.

#### HEALTH OF NEW ORLEANS

The Department of Commerce, Bureau of Census reports that for the week ending January 11, there were 183 deaths in the city of New Orleans making a death rate of 19.9. The deaths were distributed, 119 in the white population and 64 in the colored; the rate for the former was 18.2 and for the latter 24.0. Infant mortality for this week was 87. The succeeding week, ending January 18 showed quite a considerable decline in the number of deaths there being 154 listed, of which 95 were in the white group and 59 in the colored. The rate for the city as a whole was 16.7, for the white race 14.5 and for the negro 22.1. The infant mortality rate for this week was only 29, divided almost equally between the two races. The week ending January 25, there were 30 more deaths reported than for the previous week, 184 being listed

#### SIXTH INTERNATIONAL CONGRESS ON PHYSICAL MEDICINE

The Sixth International Congress on Physical Medicine will be held at London May 12-16, 1936. It will consist of sections on kinesitherapy, physical education, hydrotherapy and climatotherapy, electrotherapy, actinotherapy, radiotherapy and radium therapy. American participants will sail from New York on May 2 on the MV Britannic and return on May 31 on the SS Transylvania.

with 102 occurring in the white population and 82 in the negro. The death rate for the three groups, respectively were 20.0, 15.6 and 30.7. The infant mortality rate was 81. For the following week, ending February 8, the total deaths in the city of New Orleans was 156, divided 95 white and 61 colored. The death rate for the group as a whole was 16.9; for the white division 14.5, for the negro 22.9. The infant mortality rate this week was 122, with a nearly equal division between the two races.

#### INFECTIOUS DISEASES IN LOUISIANA

Dr. J. A. O'Hara, Epidemiologist for the State of Louisiana, has furnished us with the weekly morbidity reports for the State of Louisiana, which contain the following summarized information: For the third week of the year, ending January 18, the following diseases occurring in number greater than 10 were listed: Pneumonia 51, pulmonary tuberculosis 32, diphtheria 31, scarlet fever 30, chickenpox 29, syphilis 27, influenza 26, malaria 18, measles 15 and gonorrhea 13. Of the unusual diseases 2 cases of smallpox were reported, 2 of meningitis and 1 of tularemia. For the following week, ending January 25, measles led all reportable diseases with 56 cases being recorded. This was followed by 38 cases of pneumonia, 33 of pulmonary tuberculosis, 31 of scarlet fever, 20 of whooping cough, 19 each of diphtheria and chickenpox, 15 of cancer and 13 of syphilis. The same week there was reported a case of poliomyelitis from Concordia Parish and 2 cases of septic sore throat from St. John Parish. Evidently the report of cases of syphilis and gonorrhea had been withheld by the people who send them in because the week ending February 1, 232 cases of syphilis were included in the report and 91 cases of gonorrhea. These two diseases were followed by 37 cases of measles, 30 of pneumonia, 24 of pulmonary tuberculosis, 23 of cancer, 20 of diphtheria, 17 of scarlet fever, 16 of malaria, 13 of whooping cough and 10 of influenza. A case of tularemia was reported from Morehouse Parish and a case of smallpox from Iberville and one from Natchitoches. Again an enormous number of cases of syphilis were listed for the week ending February 8, there being 385 cases reported but only 17 cases of gonorrhea were listed. A mild epidemic of measles seemed to be present because 96 cases were tabulated. Evidently the cold weather has taken its pneumonia toll as 56 cases were sent to the Bureau of Epidemiology for this week. There were also listed 31 cases of influenza, 30 of chickenpox, 20 of malaria, 18 of pulmonary tuberculosis, 15 of scarlet fever, 13 of diphtheria, and 10 of cancer. One case of undulant fever was reported from Orachita Parish and 1 case of septic sore throat from Orleans Parish. For the week ending February 15 pneumonia led all reportable diseases,

there being 61 cases on the report. Other diseases occurring in double figures were influenza 48, measles and whooping cough 40 each, pulmonary tuberculosis 30, syphilis 29, chickenpox 26, diphtheria and scarlet fever 25 each, gonorrhea 21 and cancer 15. In the same week a case of poliomyelitis was reported from Jefferson Davis and 1 case from Orleans. Three cases of meningitis were also listed, 1 each from Assumption, Orleans and St. Bernard parishes.

#### A MEMORIAL ADDRESS FOR OUR LATE COLLEAGUE, DR. W. S. RUTLEDGE

Our Medical Society and the entire profession of the State is called to mourn the loss of a generous and understanding friend and loyal co-worker.

Having served the Parish, and later the Bi-Parish Medical Society, Dr. William Stowe Rutledge, was faithful in every office to which he was elected. But his real worth was reflected in the capacity of Secretary and Treasurer, the office which he filled for so many years, the office which made him the "spark plug" of our activities.

Medical organization, and what it stood for meant much to him; not only did he thrill from his contact with his fellow practitioners, for his friends among them were legion, knowing practically every physician in the State, all of whom knew his worth as an upstanding exponent of organized medicine. He served with distinction as a president of the Fifth District Medical Society, and it was seldom that he missed a single meeting.

As a practitioner he had the love and respect of a large clientele; the night was never too dark, nor did seeming insurmountable obstacles keep him from serving them. Whatever he did, he did with his whole might. It can be said of Dr. Bill, that wherever he went he made friends; his genial personality, and that charm which he alone had, made him "A hale fellow well met." I am sure that there is no person in the acquaintance of the writer, who could claim as many friends as he did, whether they were rich or poor, or whether it was the lowly negro, or one in affluence who came to him, to each he beamed his warm personality and benediction.

To those who knew him best, who knew his comings and goings, who knew the faithfulness of his friendship, there will always be a sense of sorrow at his passing.

S. L. White, M. D.

#### RESOLUTION ADOPTED BY JACKSON-LINCOLN BI-PARISH MEDICAL SOCIETY AT MEETING HELD JANUARY 21, 1936

Whereas, since our last meeting we have been reminded of the uncertainty of life and the certainty of death in the passing from this earth on December 30, 1935 one of our most cherished and

beloved members, Dr. William S. Rutledge; and

Whereas, Dr. Rutledge lived, moved and practiced ethical medicine in our midst for many years and endeared himself not only to his clientele but to the members of this society; and

Whereas, his interest in organized medicine never waned, having been secretary and president of this society and president of the fifth district society, an active worker for the State society and a fellow of the American Medical Association; and

Whereas, we his confreres honor his memory and shall miss his cheerful and congenial association; and

Whereas, we bow in most humble submission to the will of the "Great Physician" whose Divine plan it is that we shall all pass on to the great reward prepared for us.

Therefore, be it resolved that the Jackson-Lincoln Bi-Parish medical society express to his wife and family our deepest sympathy and assure them that we feel the loss of this man for ourselves most keenly.

Be it resolved that a copy of these resolutions be spread upon our minutes and a copy be sent to the New Orleans Medical and Surgical Journal.

Signed,

Marvin T. Green  
S. L. White.

### WOMAN'S AUXILIARY

#### Louisiana State Medical Society

President—Mrs. Hermann B. Gessner, New Orleans

President-Elect—Mrs. James Byron Vaughn, Monroe

1st. Vice-President—Mrs. Samuel B. Kreeger, Lake Charles

2nd. Vice-President—Mrs. L. E. Shirley, Jennings

3rd. Vice-President—Mrs. D. T. Milan, Monroe

4th. Vice-President—Mrs. Harry R. Marlatt, Homer.

Treasurer—Mrs. Jos. E. Heard, Shreveport

Recording Secretary—Mrs. James W. Warren, New Orleans

Corresponding Secretary—Mrs. Leonhard E. Devron, New Orleans

Parliamentarian—Mrs. C. E. Rew, Shreveport

### JEFFERSON DAVIS PARISH

The Woman's Auxiliary to the Jefferson Davis Parish Medical Society held their February meeting in Jennings at the home of Mrs. F. W. Harrell.

Miss Una Robertson of the newly organized Health Unit of this parish was present and gave a most interesting talk on the work of the unit. Members were present from Welsh and Jennings.

Mrs. Claude A. Martin, Chairman,  
Press and Publicity

### ORLEANS PARISH

The Woman's Auxiliary to the Orleans Parish Medical Society enjoyed one of their largest meetings in February. The project for the month was the "Importance of Periodic Health Examinations," and Dr. Hiram W. Kostmayer addressed the group very educationally and interestingly on "Carcinoma of the Uterus," largely from the viewpoint of symptoms and treatment.

Definite plans have been made for the celebration of "Doctor's Day" on March 30, which will be in the form of a Leap Year evening party to be given at a downtown hotel with dancing, a floor-show, cards and games for those so inclined, and refreshments. Mrs. George D. Feldner, State Chairman of Press and Publicity, gave a very interesting review of the activities of the State auxiliaries and also the work being sponsored by the North Central and Eastern States, which data was compiled from the News-Letters sent out by the A.M.A.

Mrs. Ralph J. Christman, Chairman  
Press and Publicity

### CLAIBORNE PARISH

The Woman's Auxiliary to the Claiborne Parish Medical Society met on Tuesday, February 11 in the home of Mrs. J. E. Batchelor, Haynesville. This being the last meeting of the fiscal year, the following officers were elected to serve for the year 1936:

President—Mrs. H. R. Marlatt

Vice-President—Mrs. S. A. Tatum

Secretary-Treasurer—Mrs. E. B. Middleton

Delegate—Mrs. H. R. Marlatt

Alternate—Mrs. E. B. Middleton

The Auxiliary is planning a dinner and a program in honor of the doctors of Claiborne Parish on March 30, this being the day set aside nationally to honor the doctors, both living and dead.

Claiborne Parish organized one year ago. The chief activity of the past year was to sponsor the sale of the Christmas seal; some glasses were also purchased for indigent children.

Mrs. P. Gibson, 68 years of age, wife of Dr. P. Gibson, passed away at her home on January 24 following a lingering illness. The auxiliary feels the loss of this valuable member and extends its sympathy to the family.

Mrs. E. B. Middleton  
Secretary



## BOOK REVIEWS

*Objective and Experimental Psychiatry:* By D. Ewen Cameron, M. B., Ch. B., (Glas.) D. P. M. (Sond.). New York, The MacMillan Company, 1935. pp. 271. Price \$3.00.

This volume bespeaks the author's supreme effort including chapters on Experimentation and Quantitation in General; Tests of Intelligence; Introversion—Extraversion; Word Association Tests; Conditioned Reflexes; Heredity; Statistics; Blood Sugar Tests; Response to Ephedrin and Adrenalin; Haemoclastic Crisis; Respiratory Centre and Schizophrenia; Epilepsy; Basal Metabolism; Blood-Pressure; Sedimentation Rate, Haemato-Encephalic Barrier and Ph Relations to Personality; Constitution; Pathology; Statistical Methods. These have been written as a result of much investigation and collateral reading as evidenced by the reference following each. Especial stress is laid on the ones dealing with Respiratory and Schizophrenia, Epilepsy and Constitution. Much effort has been expended on Experimentation and Quantitation, Condition Reflexes, the Haemoclastic Crisis and Basal Metabolism. In fact the writer has put forth a monumental work in the line of Experimental Psychiatry which is no doubt a foundation center for further investigation along lines advocated by the National Committee of Mental Hygiene.

It is bound together by a substantial leather top, between whose bindings are found legible type, all matter being correlated. An excellent volume for teachers as well as students.

WALTER J. OTIS, M. D.

*Body Water. The Exchange of Fluid in Man:* By John P. Peters, M. D. Springfield. Charles C. Thomas, 1935. pp. 405. Price \$4.00.

This book of 405 pages consists of twelve chapters, bibliography, author and subject index. The author and his associates have been engaged, for many years in studies directed toward understanding of the distribution and movement of solutes and water in the human body. This monograph summarizes the work and opinion of the author's group and the relevant literature of this field.

There are chapters devoted to the following subjects: chemical forces which control exchanges of fluid and solutes, the nature and movement of interstitial fluid and lymph, exchanges between blood and interstitial fluids, serous fluids and transudates, exchanges between blood cells and serum, exchanges between tissue cells and interstitial fluids, water of oxidation and the losses of water and solutes through skin and respiratory passages, alimentary exchanges, the general na-

ture of renal activity, renal excretion of filtrable organic solutes, renal excretion of water and inorganic salts, nervous and hormonal control of urine excretion.

Dr. Peters' principal clinical interest in this field has been in nephritis. It is in the chapters dealing with renal activity in health and disease that the clinician will get his greatest reward. Throughout these chapters the principle becomes obvious that renal disease cannot become intelligible except to those who understand renal physiology. The reviewer recommends this book to anyone who wishes to understand the present state of knowledge of renal physiology, normal and pathologic. Here the clinician will understand how a low albumin concentration in the urine of a patient with chronic nephritis might give a gloomy prognosis; how essential it is in the interpretation of albuminuria to know the volume of the daily urine; how the kidney sometimes seems to be more important as an organ of conservation than of secretion; how juvenile is the generally held concept of renal threshold for glucose.

Professor Peters does not attempt to settle questions when the evidence does not permit a decision at present. The reader who is less critically minded will sometimes be amazed at this tendency to balance evenly "pros" against the "cons." Those readers who hold the mechanistic theory of life as a religion will be shocked at the author's forced retreat to the teleologic point of view concerning certain phases of kidney functions.

The monograph is a valuable contribution to physiology in the healthy and in the sick. It deserves to be widely read by those who are willing to go further in the understanding of disease than rule-of-thumb thinking will permit.

ROY H. TURNER, M. D.

*The Bacteriology of Typhoid, Salmonella, and Dysentery Infections and Carrier States:* By Leon C. Havens, M. D., Ed. by Henneth F. Maxcy, M. D. New York. The Commonwealth Fund, 1935. pp. 158. Price \$1.75.

This work was written to present to laboratory workers whose experience has not brought them into practical contact with this group of diseases the practical aspects of the subject, and it may be stated that it will be found to be most helpful to this class of workers in bacteriology. The subjects are presented in a lucid manner and the data covered are those essential to a clear understanding of the bacteriology of these infections and the carrier state. It is a work that should

be useful in Board of Health laboratories and in laboratories in general where the differential diagnosis of the bacterial infections of the intestine is undertaken. The chapter upon the laboratory methods of diagnosis in bacillary dysentery is one of the best in the book and considers very thoroughly the difficulties inherent in isolating dysentery bacilli from the stools and the precautions that are necessary before success can be attained in this direction.

It is noted that in the classification of the bacteria causing dysentery the author follows the general usage in referring to one of the organisms as the "Sonne bacillus." This bacillus should be called the "Duval bacillus" for Duval was the first to describe it, many years before the appearance of Sonne's paper, in which paper Sonne himself gives credit to Duval for the discovery of this organism. It is to be regretted that usage has fixed the name "Sonne" to this bacillus rather than that of "Duval", to whom the credit rightfully belongs.

The work can be recommended to every laboratory worker interested in the subjects of which it treats.

CHAS. F. CRAIG, M. D.

*National Formulary*: 6th ed. Washington, D. C. Amer. Pharmaceutical Assn, 1935. pp. 556.

Although compiled almost exclusively by Pharmacists and intended primarily for use by them, the National Formulary can be of considerable value to members of the medical profession. The new edition based on, and supplementing, the newly revised Pharmacopeia, differs from the previous edition by the omission of over three hundred preparations, drugs, or chemicals, and the addition of nearly five hundred new ones. One notes that for the first time glandular products (seven) appear in the Formulary, and that there is a marked increase in the number of ampoules and tablets listed. That there is a striking decrease in the number of fluid extracts, miscellaneous preparations, pills, powders and syrups listed is significant of the modern trend.

J. T. HALSEY, M. D.

*Diabetes Mellitus and Obesity*: By Garfield G. Duncan, M. D., C. M. (McG), Philadelphia. Lea & Febiger, 1935. pp. 215. Price \$2.75.

I wish to commend this small book warmly for reading by the doctor in general practice who is called upon to treat diabetes. It brings within a small compass and in simple clear terms all that he needs to know for the practical management of the diabetic patient. I find myself in general agreement with most of the methods recommended, though I still remain of the Joslin School in opposition to the use of alkalis in the treatment of diabetic coma. Dr. Duncan has done well in

avoiding controversial matters. In presenting his own methods he has not failed to indicate that there are other views. The section on obesity is equally well presented and should be of very great assistance to the practitioner.

I. I. LEMANN, M. D.

*Surgery, Queen of the Arts and Other Papers and Addresses*: By William D. Haggard, M. D., F. A. C. S., D. C. L., Philadelphia. W. B. Saunders, 1935. pp. 389. Price, \$5.50.

An entertaining volume of 389 pages and containing thirty-three addresses and clinics. The dedication is to Charles Horace Mayo. It is well written and inspirational, analogous to a volume of short stories.

The first eleven essays deal with addresses that carry the romance of surgery, especially the pioneer Southern surgeon. It is stimulating to peruse an account of the first ovariectomy in the history of mankind and to realize that it happened in this country.

In the clinical essays are subjects covering the thyroid, intestines, kidneys, and spleen. It is written in such a manner as to convey to the reader the important considerations of each subject. It is flavored with a large clinical experience and contains little theory. The chapter on tumors of the kidney is outstanding in that it contains many pertinent facts in so few pages.

M. LYONS STADIEM, M. D.

*Diseases of the Nervous System*: By Smith Ely Jelliffe, M. D., Ph. D., and William A. White, M. D. 6th ed., thoroughly revised. Philadelphia. Lea & Febiger, 1935. pp. 1141. Price \$9.50.

Since 1915, the above book has been one of the standard texts in neurology and psychiatry. The present revision, the sixth, consists of approximately 1150 pages and is somewhat larger than previous editions.

In both neurology and psychiatry there has arisen a need for revision, and this text has been brought as nearly up to date as is possible in a text-book. There is no other thesis published today in the English language that surpasses this book. It is to be recommended for the student and the specialist. Both authors stand preeminently in their field.

C. S. HOLBROOK, M. D.

*Industrial Medicine*: By W. Irving Clark, M. D., and Phillip Drinker, S. B. Ch. E. Ed. by Morris Fishbein, M. D., New York. National Medical Book Co. Inc., 1935. pp. 262. Price \$3.00.

This volume is written particularly for the full time industrial surgeon, but it not without interest to physicians who handle routine workmen's compensation cases. The chapter headings are

significant, for example: Industrial Diseases, Dusts, Pneumoconiosis, Lead and Metal Fume Fever, Industrial Dermatoses, Gases and Prevention of Industrial Diseases. Twenty pages only are devoted to the consideration of industrial surgery, and in these twenty pages the authors discuss, necessarily briefly, wounds, fractures, back strain, burns and nerve injuries.

In many states occupational diseases are not covered by the Compensation Acts, a condition of affairs which, it is hoped, time will remedy. The safeguards which will ultimately protect workers are an engineering, as well as a medical problem. Two comparatively recent and dramatic disasters, one an outbreak of silicosis, another the detection of fatal radium poisoning in a number of workers, will probably do much to widen the scope of compensation legislation. For the present the physician who handles men and women engaged in hazardous occupations had best equip himself with a thorough knowledge of traumatic surgery, a definite, if limited acquaintance with medico-legal procedure, and a compact system of accurate records. It can hardly be said that the volume reviewed contains the answer to the many problems of routine compensation work, it is rather a thoughtful, but rambling discourse on industrial disease, physical examinations and card index systems.

E. A. FICKLEN, M. D.

*Gynecological and Obstetrical Tuberculosis:* By Edwin M. Jameson, B. S., M. D. Philadelphia. Lea and Febiger, 1935. pp. 256. Price \$2.50.

There was once a form of faith healing, now extinct, which was preceded by a sort of medical examination. It was the "royal touch" for the "king's evil." The king's evil was scrofula, or tuberculosis of the glands of the neck. This practice originated with Edward, the Confessor, in England. In marked contrast recent years have shown medical and surgical treatment of tuberculosis to have made rapid strides. In reading Jameson's, "Gynecological and Obstetrical Tuberculosis", one appreciates the concise and newer aspects of female genital tuberculosis. Detailed study of the female organs received at autopsy from tuberculous women, although of a small series, undoubtedly is of instructive value. It is a widely accepted fact that genital tuberculosis is usually secondary to another focus of infection and because of lessened blood supply frequently locates at the ampullar portion of the tube. A well discussed topic is that of tuberculosis of the fallopian tubes. Admitting that diagnosis of tuberculous salpingitis is difficult the views relative to subjective and objective data are clarified.

Maternal instinct is highly developed in a good proportion of women. Some of them have tuberculosis of the lungs. Views as to the proper

course to follow when these handicapped women come under one's charge is frequently biased by customs of religion and country as well as social status. Ldytin and Linde state, "Each case must be weighed on its own merits after considering the clinical signs, social conditions and other factors difficult to codify." Metzger believes, "that if a patient shows signs of improvement in her pulmonary lesions during the first few months of pregnancy, she will probably endure the remaining period of gestation without mishap. On the other hand, if the tuberculous process continues to progress after the sixth month, a fatal outcome may almost always be anticipated."

I feel that this volume is timely and well presented.

GEORGE A. MAYER, M. D.

*Textbook of Bacteriology:* By Thurman B. Rice, A. M., M. D., Philadelphia. W. B. Saunders Co., 1935. pp. 551. Price \$5.00.

It has been the aim of the author to write a textbook which is practical and fundametal and in which highly theoretical conclusions have been eliminated. In this he has succeeded very well. His arrangement of dealing with the various groups of microorganisms is to be recommended, that is, giving first an historical discussion and following then with descriptions under separate headings of morphology, cultural characteristics, and pathogenicity. The subject of immunology may have been dealt with a little too lightly. The correlation between bacteriology and clinical medicine is well carried out. The book is well suited to the busy practitioner who may need a brief practical text for reference. It is probably too brief for the undergraduate student in medicine unless it were augmented by lectures and collateral reading.

H. J. SCHLATTENBERG, M. D.

*Practical Clinical Psychiatry for Students and Practitioners:* By Edward S. Strecker, A. M., Sc., D. M. D.; and Franklin G. Ebaugh, A. B., M. D. Philadelphia. P. Blakiston's Son & Co., Inc., 1935. pp. 651. Price \$5.00.

The fourth edition of this textbook has been largely revised and amplified. The authors are teachers with a thorough appreciation of the recent trends in psychiatry.

A knowledge of psychiatry is difficult to acquire by reading, but much of this difficulty is eliminated in this text by the clear presentation of the material and by the illustrative case histories which are added to the various chapters.

This book can be highly recommended for teaching purposes and will prove of great worth to the physician who wishes to obtain information about usual psychiatric conditions.

C. S. HOLBROOK, M. D.



*Textbook of Clinical Neurology:* By Israel S. Wechsler, M. D., 3d. ed. reset. Philadelphia. W. B. Saunders Co., 1935. pp. 826. Price \$7.00.

The 1935 revision of the *Textbook of Clinical Neurology*, by Wechsler, is unhesitatingly recommended to practitioners, teachers, and students not only because of its comprehensive presentation of the subject but also because it contains the latest information on neurology without devoting space to unproved theories and practices as do so many textbooks on this subject. Of particular value is the fact that there is included with the organic material a section devoted to functional nervous disturbances, a subject of great importance in view of the ever increasing amount of medico-legal work occurring daily and of which functional nervous disorders, particularly post-traumatic anxiety states, constitute the largest part. We welcomed the previous edition of this book as an ideal text and constitute the largest part. We welcomed the revision which brings to date neurological material and so constitutes an unusual procedure, for few texts are revised frequently enough to be of value beyond a rather limited period of time.

FREDERICK L. FENNO, M. D.

*New Pathways for Children with Cerebral Palsy:* By Gladys Gage Rogers and Leah C. Thomas. New York, The MacMillan Company, 1935. pp. 167. Price \$2.50.

The authors, Director, and the Director of Therapeutics at "Robin Hood's Barn," respectively, outline the methods used in training the spastic child. Better results in muscle training have been obtained through daily activity, play, and games than by set periods of mechanical exercises. Ingenious and practical apparatus for the comfort of the child is described.

A plea is made for the special and intensive education of the spastic child, in order that he may overcome his feeling of inferiority, enjoy a rich mental life, and, if not too seriously handicapped, prepare to engage in a gainful occupation.

While few children can have the group association with similarly handicapped children and the specialized training offered in the unique organization at "Robin Hood's Barn," parents who read this book will have a clearer comprehension of the problems which confront the spastic child, and will receive inspiration and practical suggestions for overcoming these problems.

INA M. HARPER, M. D.

*Puerperal Gynecology:* By J. L. Bubis, M. D., F. A. C. S. Baltimore, William Wood & Co. 1935. pp. 199. Price \$3.50.

Like oncoming lights of an automobile through the fog Dr. J. L. Bubis' *Puerperal Gynecology* heralds the present day obstetrics with definite plans. The topics of new and old lacerations (especially

the latter) have been kept fog bound as a conservative protection for the parturient. The present day finds more trained men doing obstetrics as a specialty, individualizing and giving this topic attention.

Puerperal Gynecology of July 1935 gives concise and valuable detailed data. The reader should first turn the pages to Chapter IX, No. 5, page 12, line 11 which sounds the keynote. It is as follows, "It is therefore paramount that anyone attempting this repair should be able to work quickly, handle the tissues gently, and not get excited by the presence of active bleeding." Technically, obstetrics is more than just ligating the cord. The first chapters emphasize the value of knowing the patient well, a familiarity with all physical conditions. Thus can one prepare for the things to be done immediately if conditions are suitable after delivery.

The last chapters deal with much needed sound clinical post-partial treatment. His statistics give one an idea of its value to the community and the individual. Do not be misled however, because his figures are the result of twenty-five years of training and a perfectly functioning clinic with every one deeply interested.

GEORGE A. MAYER, M. D.

*International Clinics*, December, 1935. Philadelphia, J. B. Lippincott Co. 1935. pp. 331. Price, \$2.50.

In this volume the articles are confined to the divisions of medicine and surgery. The superior quality of its predecessors is maintained in this volume. Of interest to our local physicians is the splendid article on *The Present Status of the Treatment of Diabetes Mellitus*, by Dr. Manuel Gardberg, in which he adequately presents the modern concepts of treatment.

I. L. ROBBINS, M. D.

*Stomach and Duodenum:* By George B. Eusterman, M. D., F. A. C. P. and Donald C. Balfour, M. B., M. D. (Tor.), LL.D., F. A. C. S., F. R. A. C. S. and Members of the Staff of the Mayo Clinic and Mayo Foundation for Medical Education and Research. Philadelphia, W. B. Saunders Co. 1935. pp. 958. Price, \$10.00.

Here is a book worthy of the great repute of its authors. In a manner that is at once forceful and charming they have presented a vast array of facts and statistics that bid fair to make this volume one very much sought after both by teachers, students and practitioners. The medical and surgical aspects of diagnosis and treatment are intimately detailed at first in a general way and in the latter portion of the book according to disease entities. As one reads, he soon feels that here is embodied the ripe experience of men who are all scientists and true physicians, and happily

endowed with the great gift of translating abstruse science into up-to-date clinical medicine.

The chapters devoted to the physiology and pathology of the stomach and duodenum are the works respectively of W. C. Alvarez and W. C. McCarty. The history of examination, the test meal and other auxiliary methods of examination are presented in great detail. The surgical anesthesias and technique with their indications and contraindications are elaborately written and striking drawings illustrating operative procedures deserve special comment. The great medical wealth of the Mayo Clinic has been freely drawn upon and this in itself assures one of the latest methods in diagnosis and treatment in the field of gastroenterology.

I. L. ROBBINS, M. D.

*The Patient and the Weather:* By William F. Petersen, M. D. vol. 1 Pt. 1—The Footprint of Asclepias, Ann Arbor, Mich. Edward Brothers, Inc. 1935. pp. 127. Price, \$3.75.

Although the first of three volumes, it has been last to be published. The other two volumes were discussed at some length in previous issues of this journal. In this smaller volume the author presents the theses that he is to develop at great length in vols. 2 and 3. He also gives the historical background of his special subject, laying special emphasis on the great contribution of Hippocrates to this interesting and important matter.

I. L. ROBBINS, M. D.

*The Kidney in Health and Disease*, ed. By Hilding Berglund, M. D., & Grace Medes, Ph. D. Philadelphia, Lea & Febiger, 1935. pp. 745. Price \$10.00.

This volume presents a complete study of the kidney, each phase of which study is described by a writer recognized as an authoritative investigator in his field. Forty-one workers contribute to make this book a rather exhaustive reference work on its subject. Whether he be investigator, teacher, or practitioner, the physician cannot fail to find much of great interest and aid to him by frequent resort to its pages. The anatomist, biochemist and physiologist will find it no less important.

MANUEL GARDBERG, M. D.

*Medical Tactics and Logistics:* By Col. G. M. Blech and Col. Charles Lynch. Springfield, Ill. Charles C. Thomas Co., 1934. pp. 205. Price \$4.00.

This small book of less than 200 pages, in a very systematic and clearcut manner, presents tactical

information that is essential to every medical officer. The authors have succeeded admirably in visualizing important activities of medical units in the zones of operation. The book is recommended to all medical reserve officers, especially those younger ones, who are patriotically offering their services in their country's defense. It will enable them to obtain a clear insight into their duties, which otherwise might prove confusing.

JOHN A. LANFORD, M. D.

#### PUBLICATIONS RECEIVED

Published by the Board of Trustees, Washington, D. C.: "The Pharmacopoeia of the United States of America."

P. Blakiston's Son & Co. Inc., Philadelphia: "Recent Advances in Medicine Clinical Laboratory Therapeutics" by G. E. Beaumont, M. A., D. M. (Oxon.), F. R. C. P., D. P. H. (Lond.) and E. C. Dodds, M. V. O., D. Sc., Ph. D., M. D., F. R. C. P. G. P. Putnam's Sons, New York: "You Must Eat Meat" by M. E. Jutte, M. D. Lea & Febiger, Philadelphia: "Common Contagious Diseases", by Philip Moen Stimson, A. B., M. D.

The Johns Hopkins Press, Baltimore: "The Medical Man and The Witch During The Renaissance" by Gregory Zilboorg, M. D. "John Whitridge Williams' Academic Aspects and Bibliography", by J. Morris Slemmons. "A Doctor's Odyssey" by A. Gaylord Beaman. "The Cerebrospinal Fluid and Its Relation to the Blood" by Solomon Katzenelbogen, M. D.

Charles C. Thomas, Baltimore: "Clinical Miscellany" Vol. II, 1935 by The Mary Imogene Bassett Hospital, Copperstown, New York.

The MacMillan Company, New York: "The Art of Ministering To The Sick" by Richard C. Cabot, M. D. and Russell L. Dicks, B. D.

National Medical Book Company, Inc., New York: "Abnormal Arterial Tension" by Edward J. Stieglitz, M. S., M. D., F. A. C. P. "The Management of Colitis" by J. Arnold Barger, M. D., F. A. C. P. "Obstetrics For The General Practitioner" by J. P. Greenhill, B. S., M. D., F. A. C. S.

William Wood & Company, Baltimore: "Regional Anatomy Adapted to Dissection" by J. C. Hayner, B. S., M. D. "Fasciae of the Human Body and Their Relations to the Organs they Develop" by Edward Singer, M. D. "Diagnosis in Joint Disease A Clinical and Pathological Study of Arthritis" by Nathaniel Allison, M. D., F. A. C. S., and Ralph K. Ghormley, M. D.

The Commonwealth Fund, New York: "Lobar Pneumonia and Serum Therapy" by Frederick T. Lord, M. D. and Roderick Heffron, M. D.

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## COMMON MANIFESTATIONS OF GASTRO-INTESTINAL FOOD ALLERGY\*

W. H. BROWNING, M. D.  
SHREVEPORT, LA.

The mechanism responsible for the allergic state is not so much a pathologic condition as it is a pathologic exaggeration of a normal physiological response<sup>1</sup>. The mechanism usually considered necessary for the development of the allergic state exists normally in each of us. This has been definitely proved by Walzer and his associates<sup>2</sup>. These workers obtained serum from a case strongly allergic to fish and injected it into the skin of a non-allergic recipient, thereby rendering this portion of the skin passively sensitized to fish. The recipient ate the fish in question, and within a short time urticarial wheals appeared at the site of the passive transfer. This was repeated, and the work was checked with controls. The same results were produced again in a case sensitive to eggs. These experiments are frequently confirmed by almost everyone specializing in allergy. The following case histories illustrate this phenomenon:

Baby C. W. V., Jr., on whom an eczema had developed when he was three weeks old, was brought to me at the age of six months for examination and treatment. Since the baby was breast fed, the attending physician thought it wise to place him on cow's milk. The eczema progressed and soon extended over the entire body. The baby was then placed on Sobee<sup>3</sup>, later on goat's milk, and then eventually on many other formulae, each of which seemed to be worse than the previous one. At the age of six weeks, the baby developed

asthma and continued to have the asthma at frequent intervals until the time of the allergic examination. The father acted as test subject, and forty areas of skin were sensitized by using serum from the baby. These areas sensitized were on the back, abdomen, arms, forearms, and thighs. On the third day after the injection of the serum, the father ate an egg for breakfast. About two and a half hours after ingestion of the egg, he called me by long distance telephone to tell me that each of the forty areas which had been sensitized had suddenly become a large wheal and was itching severely. Thirteen days later, at my suggestion, he again ate eggs for breakfast and had a return of the giant wheals at the point of the injections. It was found that the baby was strongly sensitive to eggs, but the father was not sensitive to them. The baby was sensitive to milk, wheat, and many other foods which the father ate almost daily, but which did not cause him to have urticaria.

Another interesting case is that of Baby J. B. H. Jr., whom I first examined at three months of age. This baby had an eczema involving the face, arms, forearms, and upper portion of the chest. Since the mother of the baby had urticaria frequently, and the baby was breast fed, the mother thought it probable that if she were placed in a state of allergic balance, the baby would not have his eczema. She was tested and found sensitive to many foods. These foods were eliminated from her diet, and she was relieved immediately. Unfortunately, placing the mother in a state of allergic balance did not relieve the baby. By doing a passive transfer test, using an aunt as test subject, it was found that the baby was sensitive to several foods to which the mother was not sensitive. As soon as these additional foods, the principal one of which was egg, were eliminated from the diet of the mother, the baby cleared up and has remained well to the present time.

Prior to the work of Walzer and his associates<sup>2</sup>, it was generally believed that the one requisite for the production of the allergic state was the introduction of foreign protein directly into the blood stream. If the work of Walzer

\*Read before the Louisiana State Medical Society, New Orleans, April 29-May 1, 1935.



and his associates is correct, and if such observations as those mentioned above are to be considered, we must change our conception of protein metabolism. If the proteins are broken down into their constituent amino acids in the alimentary canal and absorbed into the blood stream as such, it is quite evident that they should not produce symptoms in the nursing baby or in the individual who has certain areas of skin passively sensitized to foreign protein. It is evident from these observations that the requisite for the production of the allergic state is normally present whenever protein foods are being assimilated.<sup>1</sup> Why it is that some persons do become sensitized under these conditions and other persons do not remains to be explained.

Food sensitization may be responsible for many allergic conditions, some of which I shall not discuss. The more important manifestations are asthma, allergic bronchitis, hoarseness, perennial hay fever, sinus trouble, urticaria, angio-edema, eczema, headaches, and migraine. Though there are other causes of these conditions, it should be remembered that food sensitization is very often the causative factor.

#### INDIGESTION

This indefinite word is the chief complaint of more than fifty per cent of the patients seen by most internists or general practitioners. If the patient has an organic disturbance in the abdominal cavity, such as an ulcer, chronic appendix, acute appendix, or gall bladder disease, the chief complaint is usually indigestion. On the other hand, we see many patients who complain of indigestion for which no organic cause can be found. Most of these patients and many of those who have definite symptoms of an organic disturbance which can not be confirmed by the usual methods of examination have a food sensitization. If we keep food allergy in mind, we can certainly improve our diagnostic efficiency. We must remember, however, that an allergic individual, in addition to his allergy, may have any organic disturbance of the intestinal tract, such as appendicitis, cholecystitis, cholelithiasis, diverticulosis, intussusception, volvulus, fecal impaction, or carcinoma. The following case history will illustrate that allergy may be responsible for

symptoms that are usually found with an organic condition.

Mrs. J. A. S., aged 61 years, was examined in November, 1932. For over twenty years this patient had been troubled with intestinal symptoms upon the basis of which her family physician had made separate diagnoses of gall stone colic and acute appendicitis. A consulting surgeon had upheld the former diagnosis. When, about nineteen years prior to my own examination, another surgeon made the diagnosis of acute appendicitis, an exploratory operation was performed. Both gall bladder and appendix were found to be perfectly normal. The appendix was removed. While still in the sanitarium, convalescing from the operative procedure, the patient had an attack simulating acute appendicitis. She continued having these attacks every week or two during the next nine years. In 1923, a diagnosis of duodenal ulcer was made. This diagnosis was confirmed by roentgen ray examination but the condition failed to respond to the usual ulcer treatment. Symptomatic relief for about a year was obtained by strict dieting. After this period, the patient, no longer adhering to any dietary regime, at varying times had symptoms of duodenal ulcer, of cholecystitis, or of acute appendicitis. Roentgen ray studies made during the course of my examination revealed that she had a duodenal ulcer, a normal functioning gall bladder and a colon spastic in the descending portion. It was found that she was sensitive to many foods, and the elimination of these has given complete relief to this patient's distressing symptoms.

The following case illustrates that an organic condition may be responsible for an allergic unbalance:

Mrs. R. V. R., aged 33 years, was examined in June 1933. This patient had giant urticaria almost continuously. Its severity was such that testing was very unsatisfactory, because comparatively few areas of normal skin large enough for the conducting of tests could be found on the body. After this rather unreliable testing had been completed, the patient was placed on a diet. She showed very little improvement; the urticaria persisted, and adrenalin, ephedrine, and other drugs had to be resorted to almost constantly. The patient had pain and soreness in the lower right quadrant of the abdomen almost continuously, symptoms which I judged to be allergic manifestations. The diet was changed many times, tests were repeated, elimination diets were tried, food diaries were kept, but still she did not improve. During the latter part of 1933, she had an attack of acute appendicitis, and the appendix was removed by one of my associates. Since that time she has had no trouble with the urticaria

except when she eats excessive quantities of wheat products.

#### PEPTIC ULCERS

Every internist has patients with peptic ulcers that seem to resist all forms of treatment. During the last five years, I have used five or six different specific treatments for peptic ulcer. Instead of using the specific treatment as it was usually outlined by the manufacturer of the product, I used it in conjunction with a modification of the Sippy treatment. So far as I have been able to determine, my results have been about the same as they were when I used just the modification of the Sippy treatment. These adjuncts to the treatment have done very little or no good. If one treats many peptic ulcers and uses the Sippy treatment or a modification thereof, eventually he will have on his hands a number of patients who have their symptoms year after year. These patients may get temporary relief while on strict dietary regimes. They may be able to go on fairly liberal diets for a few months, but the symptoms usually return. Kern has made the observation that peptic ulcer, in persons allergic to milk, heals much more rapidly if the ulcer diet contains no milk.<sup>4</sup> In the early part of 1933, I began experimenting with patients who had not responded to the usual treatment for peptic ulcer. These studies were continued throughout 1934. Most of the patients were found to be sensitive to milk, and those who were not sensitive to milk were found to be sensitive to some food which had been added to their diets early in the treatment. At the beginning of 1935, because of my unusually good results on those patients whom I considered would not respond to the medical treatment of peptic ulcer, I began using this form of treatment for all types of peptic ulcer. Of course, at this time, it is too early to evaluate any of the results. The following case report illustrates one of the patients who has had his symptoms for a number of years. I have selected this case primarily because this doctor has been of untold assistance to me in experimenting with his diet.

Dr. B. H. D., aged 40 years, had been under my care since the latter part of 1928 and under the care of my associates and myself for a period of thirteen years. The symptoms, physical examina-

tion, and roentgen ray examination revealed that he had a duodenal ulcer. The ulcer resisted all forms of medical treatment, and for this reason we had on numerous occasions advised operative procedure, which he persistently refused. In July, 1934, after having relieved two of his patients who had findings of marked similarity and of about equal duration, I, at his request, did a food test on him. Within a week after going on a diet eliminating several foods to which he was sensitive, he was relieved of all symptoms. Since that time, he has experimented with his diet and can at will cause a return of symptoms. For the first time in thirteen years, a roentgen ray examination recently made failed to reveal an ulcer. Throughout the course of his illness, this patient was troubled with constipation. Since the beginning of our present plan of treatment, with the exception of those times when we are experimenting with the diet, he has been relieved of this condition.

#### COLIC AND COLITIS

The colon often reacts, sometimes in an acute flare-up, sometimes with persistent, chronic symptoms. The infant with colic is at times allergic. Mucous colitis is almost always due to an allergic reaction. The symptoms are cramping, lower abdominal pains which come and go, sometimes diarrhea, and often the passing of strings of jelly-like mucus in the stool. The condition is often mistaken for chronic appendicitis, and the appendix is not infrequently removed without benefit.

#### CONSTIPATION

There are many causes of constipation. Allergy is only one of them. Spastic constipation is usually allergic. The predominant feature of gastro-intestinal allergy is spasm of the intestinal muscles. Sometimes this increased spasticity takes the form of increased peristalsis with consequent diarrhea; sometimes the spasm remains more stationary, and then we have spastic constipation. The diarrhea and constipation may alternate.

#### DIARRHEA

Recently,<sup>5</sup> I reported a series of cases, all allergic, presenting this symptom. Most of these patients had been treated for many years, some of them for amebic dysentery, some for hypochlorhydria. As a matter of fact, almost every known treatment for diarrhea had been used on them. The acute diarrhea of short

duration found in some cases of food idiosyncrasy and caused by some easily identified food, such as crab meat, or strawberries, can be readily corrected by the avoidance of the particular food to which the patient is sensitive. The chronic diarrheas due to food ingested almost daily, such as milk, wheat, eggs and Irish potatoes, require an allergic survey for the determination of the allergens. The following case, not of long duration is rather typical:

Mrs. A. J. M., aged 62 years, came to me in August, 1934. About six months prior to the examination she had become rather suddenly subject to diarrhea. She had from eight to twenty very watery bowel movements daily. There was no fever, no distention, no tenesmus, no blood, but there were large quantities of gas. She had been on several diets, but had received no relief from them. She had taken the usual medication without relief. During the two weeks previous to my examination, there had been large quantities of mucus. She had been troubled with asthma since early childhood and with hay fever for four years. After being tested, she was placed on a diet which eliminated wheat, eggs, milk, and many other foods. Since that time, she has had very little trouble. When she does have any, she can account for it by some discrepancy in the diet; for example, on several occasions she obtained rye bread from the baker, and diarrhea was produced by the wheat flour in the bread.

#### CYCLIC VOMITING

Some children have periodic attacks of nausea and vomiting with fever, usually attributed to appendicitis, but actually due to food allergy. The child with cyclic vomiting often becomes the adult with migraine<sup>6</sup>.

#### ITCHING PILES AND PERI-ANAL ECZEMA

There are many causes of this condition, but most of them can be eliminated by rectal examination. This should be done before considering allergy. If no cause can be found, we should remember that one-third of the cases are allergic.<sup>7</sup>

#### EPILEPSY

In 1924, Miller<sup>8</sup> reported a series of cases of epilepsy. He reported thirty-eight per cent of his cases relieved. This result is certainly better than most allergists have been able to obtain since that time. I personally believe that these cases are due to a mistaken diagnosis, just as many cases have been called epileptics

when, as a matter of fact, they had a hypoglycemia. The epileptic relieved by allergic methods of treatment is like the patient who has a bronchial pneumonia that can be relieved by one or two doses of adrenalin. In other words, I believe that our epileptics who are cured by allergic methods of treatment are not epileptics at all, but are persons who have anaphylactic shocks due to certain foods. The following history illustrates a case of this kind:

Mr. W. S. W., aged 40 years, was first examined by me on February 1, 1933. For eight years prior to my examination he had been troubled with peculiar attacks of unconsciousness and shock. Several physicians had made diagnoses of epilepsy, but the patient thought his attacks were in some way due to foods. His attacks usually began with pain in the abdomen and most often were accompanied by nausea and vomiting, profuse perspiration and weakness. Sometimes he lost consciousness, although the attacks were not always so severe. At first they occurred only occasionally, but at the time of my examination he had them weekly. As a boy he had worked around flour mills and had been troubled with asthma, angioedema, and urticaria. After coming South, these allergic manifestations stopped, but within a year he developed the more serious malady mentioned above. He was found to be sensitive to several foods, wheat being the principal one. Elimination of these foods from his diet effected an immediate cure. He returned to the North in 1934. A letter received from him last December states that he was perfectly well at that time.

#### SUMMARY

1. The physiology of the allergic state is discussed, with the presentation of two cases illustrating a phase of protein metabolism not understood at the present time.

2. A case is reported illustrating that the allergic state may simulate such pathologic conditions as acute appendicitis and acute cholecystitis.

3. A case is presented illustrating that a pathologic gastro-intestinal condition may be a contributing factor to a state of allergic unbalance.

4. Recent experimenting in the allergic treatment of cases of peptic ulcer indicates that patients who do not respond to the usual medical treatment may respond to allergic methods of treatment. The latter form of treatment is



now being tried on all cases of peptic ulcer seen by the writer.

5. Additional gastro-intestinal allergic manifestations are discussed.

6. A case of anaphylactic shock simulating epilepsy is reported.

#### BIBLIOGRAPHY

1. Vaughan, Warren T.: Some observations on food allergy, *Am. Jour. of Digest. Dis. and Nut.*, 1:384, 1934.
2. Walzer, Matthew: Studies in absorption of undigested proteins in human beings: simple direct method of studying absorption of undigested protein, *Jour. of Immun.*, 14:143, 1927.
3. Hill, L. W., and Stuart, H. C.: A soy bean food preparation for feeding infants with milk idiosyncrasy, *Jour. Am. Med. Assn.*, 93:985, 1929.
4. Kern, R. A., and Stewart S. G.: Allergy in duodenal ulcer. Incidence and significance of food hypersensitiveness as observed in thirty-two patients, *Jour. of Allergy*, 3: 51, 1931.
5. Browning, W. H.: Allergic diarrheas, *Tri-State Med. Jour.*, 7: 1426, 1935.
6. Balyeat, Ray M., quoted by Vaughan, Warren T.: *Allergy and Applied Immunology*, Edition I, page 313, C. V. Mosby Company, 1931.
7. Vaughan, Warren T.: Food allergy in the specialties and in general medicine, *Virginia M. Monthly*, 56:725, 1930.
8. Miller, Joseph L.: Evidence that idiopathic epilepsy is a sensitization disease, *Am. J. M. Sc.*, 168: 635, 1924.

#### DISCUSSION

Dr. A. L. Levin (New Orleans): Food allergy is no longer confined to the domain of experimental medicine. It has advanced very rapidly. The time is ripe for food allergy to occupy a more important place in modern medicine. The average practitioner is not allergic minded. Dr. Browning deserves credit for bringing to our attention such an important subject. The mucous membrane of the gastro-intestinal tract no doubt plays the same role for the offending molecule of food protein as the mucosa of the respiratory tract does for the pollens of plants, flowers, trees and grasses. The manifestations are known though the *modus operandi* is still a mystery. Various theories and explanations do not satisfy all avenues of doubt. Skin tests unfortunately are not always reliable criteria for the determination of gastro-intestinal hypersensitiveness. This is probably accounted for by the fact that the individual is sensitive to some digestive by-product rather than to the substance for which the test is made. The gastro-intestinal disturbances considered to be of allergic origin are the following: sensory disorders of the tongue and mucosa of the mouth; sores within the mouth; swelling of the tongue and buccal mucosa; swelling of the lips; canker; nausea; anorexia; vomiting; intestinal hyperactivity and pain. According to Duke the abdominal pain and other gastro-intestinal symptoms seem fundamentally analogous pathogenically to the symptoms of hayfever and asthma. Following

the injection of pollen extract, some patients suffer from varying grades of indigestion and abdominal pain. The pain is severe, localized in the epigastric area, and lasts sometimes for hours. In some cases this is the only manifestation of reaction to pollen. It is also an interesting fact that about 50 per cent of patients suffering from food allergy have had demonstrable pathologic lesions in the alimentary tract or its appendages. Claims are made by some observers that alimentary allergy is responsible sometimes for spasm, hypermotility, hypersecretion, edema of the mucosa and local anemia. Exploratory findings of the gastro-intestinal tract often revealed hemorrhages in the bowel wall, edema of the intestinal mucosa, utricular swelling of the stomach and smooth muscle spasm.

The history of the patient as a rule makes the diagnosis. An individual who is ordinarily free from digestive disturbances will invariably develop gastro-intestinal symptoms after eating certain kinds of food. This is definitely a case of food allergy. In chronic diarrhea of allergic origin it is often difficult to ascertain the character of food causing the irritation. The fortunate element about food allergy is the simple plan of treatment; eliminate the offending article of food; and this is often of great diagnostic significance.

I have seen cases where endocrine insufficiency produced manifestations thought to be of food allergy and the relief came not from the elimination of food but only after glandular therapy. The results were spectacular. I am still skeptical about accepting the contention that a real chronic septic ulcer can be produced by food allergy and that such an ulcer will heal promptly by mere food elimination process.

In regard to appendiceal symptoms masked by allergy, I would not advise anybody to take a chance on the side of allergy but would urge surgical intervention. This is the real danger point in allergy. Remember we still see too many cases of ruptured appendices.

Dr. B. G. Efron (New Orleans): I want to thank Dr. Levin for stating that we allergists have gotten to the stage of medical respectability, and also want to compliment Dr. Browning on his extensive series of food allergies. In our work we have been unable to get such an extensive series of purely food cases. We do see cases sensitive to foods. Certainly, at least in New Orleans, we do not see such a tremendous number of pure food allergies. About three years ago, I reported a small series of allergies with only gastro-intestinal manifestations.

My own experience as to skin tests: I used to say 50 per cent of cases gave a positive reaction, now I would say only about 25 per cent give positive reactions. Anybody who does allergy, by relying on skin tests entirely, will miss just as many

cases as one would miss, let us say, of syphilis, by relying on a positive Wassermann. It is only fortunate that some cases give us diagnostic reactions, particularly is this true of urticaria and angioneurotic edema.

One question I would like to ask Dr. Browning is what antigens does he use for tests? Does he use the scratch test or intradermal technic? If he uses the intradermal technic, what strength dilutions does he use?

The use of the diets originally put out by Rowe and modified biologically by Vaughan together with diet diaries is of inestimable value in arriving at a diagnosis of food allergy.

Some diarrheas, Dr. Silverman and myself discovered, are due to sensitivity to *B. dysenteriae*.

Dr. Daniel N. Silverman (New Orleans): It seems to be a contention between the gastroenterologists and the allergists and I cannot let them outnumber us.

Sometimes symptoms point very prominently to organic lesions and may really be due to other causes. Infrequently, hemorrhage from the intestinal tract is due to hypersensitivity to food. One striking case of this I encountered was in a butcher who was hypersensitive to veal. It was thought he had an ulcer as he had a massive intestinal hemorrhage and during investigation he developed a typical case of urticaria, and upon investigation of the latter symptom it was found to be a case of food allergy. Thinking I had somewhat of an unusual case at the time, I looked up the literature and Lenz of Brooklyn, ten years ago, had shown that in cases of asthma, 50 per cent bled from the intestinal tract.

As a result of this particular case of hemorrhage from the intestinal tract, I stumbled upon the fact that there was such a condition of anaphylaxis or reaction in *B. dysenteriae* infection. This first case that I saw was one who gave a history of having had dysentery five years ago, had no dysentery, but continued to bleed from the lower mucous membrane. She harbored *B. dysenteriae* as was shown by skin tests and this was a true case of allergy due to *B. dysenteriae*.

Dr. W. H. Browning (In conclusion): I wish to stress one point mentioned by Dr. Levin and to agree with his statements in general. There must be some relation between allergy of gastrointestinal and respiratory systems to liver dysfunction. Experimental work indicates that the liver fails to act as a capable barrier to proteins in the allergic individual.

To answer Dr. Efron's question about the antigen used. I use the scratch and intracutaneous methods of testing. For the former, I use antigens prepared by Arlington Chemical Company, and for the latter, I use the antigens of Lederle. The dilution of the intracutaneous antigens varies according to nitrogen content.

The trouble with food testing is that we frequently do not do enough testing. Many tests are necessary. Both methods of testing should be used and large numbers of foods should be used. The elimination diets of Rowe, Vaughan and others are often useful. The food diary, introduced by Vaughan and modified by Rinkle, is helpful.

About finding so many pure food allergics, I will say that food allergy is much more common than is usually thought. There may be some other allergic manifestation present and complicating the picture. However, pure food allergy is by no means rare.

I have had no experience with the type of case that Dr. Silverman mentions.

## DIGITALIZATION IN CARDIAC FAILURE\*

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NEW ORLEANS

This subject is being presented because it has been my experience that both medical students and physicians alike are rather skeptical today as to the good results to be gained by the use of digitalis in cardiac work. On several occasions, when suggesting a change in the manner or method of using this drug, I have been frankly told that "it would make very little difference how the digitalis was administered, as but a small amount of good could be expected, at best". Now it is my candid opinion, that, barring the ever present possibility of idiosyncrasy, over which neither physician nor patient has control, but which, after all, causes only a very small percentage of the supposedly bad and indifferent effects of digitalis, the fallacious idea mentioned above has been brought about, because of any one, or all, of three common causes, namely:

1. The use of digitalis, when contra-indicated.
2. The prescribing of a tincture of insufficient strength.
3. Inadequate dosage; as a rule, entirely too small.

Now I will endeavor to say just a few words in explanation of these.

\*Read before the Louisiana State Medical Society, New Orleans, April 29-May 1, 1935.

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Under the first heading, namely, contra-indications, I wish to emphasize the fact that the use of digitalis should be limited only to those types of heart cases from which good can be expected, and that this drug should not be prescribed promiscuously in each and every condition associated with cardiac pathology, such as, sad to say, was formerly the case. Most of us can remember the days, and not so very long ago, when our patients were routinely placed on digitalis just as soon as a cardiac diagnosis was made, regardless of type, condition, or etiology; and quite naturally very little good, and maybe a great deal of harm, could have been expected from such haphazard administration.

How often can we recall the instances when apparently healthy young men and women were placed upon digitalis, merely because some eager and inexperienced physician found the presence of a systolic murmur at their apex? Likewise, how often can we recall the times when some youthful robust athlete was given digitalis, merely because an over-zealous examiner found evidences of hypertrophy? These poor individuals, thinking they were afflicted with a so-called "Bad Heart", were prone to neurasthenia, and went through life victims of cardiophobia, if we may so coin the term, always fearful of a veritable "Sword of Damocles" forever overhanging their head. Again, can we remember the instances when routine digitalization was instituted in each and every case of lobar pneumonia, whether there was a particular need for the drug, or not! If we look fairly and squarely into the past, we will recall how certain of those patients were overstimulated, actually made worse, by the too free use of an unwisely employed drug. But today we are taught differently. In our pneumonias, instead of resorting to routine digitalization as formerly, we prescribe this drug, only when the pneumonitis shows signs or symptoms of a failing or fibrillating heart, proving that there is an actual and undeniable demand for its use in that particular case. Today we are taught that certain of the arrhythmias, such as extrasystoles, block, and the like, are real contra-indications to the use of digitalis, and therefore, in these conditions,

other types of medication should be given. Now, having dwelt at length on when not to employ digitalis, the question naturally arises:—"What are, then, the chief cardiac indications which actually call for the need of this drug?" We may simplify our answer by stating that the three chief heart conditions which unquestionably require digitalization, are cardiac failure and auricular fibrillation and flutter. Time does not permit me, here, to go into detail as to which signs and symptoms constitute the broad term "failure", but we can say that evidences of right heart dilatation, as well as gallop rhythm and pulsus alternans, when the latter occurs at a normal rate and not accompanying paroxysmal tachycardia, are all accurate signs of a failing myocardium. Likewise do we know that dyspnea on exertion, moist rales at the bases of the lungs, edema of the ankles at the end of the day, and hepatic enlargement are all confirmative signs of heart failure, and are therefore justifiable indications for the employment of digitalis.

In the second category, namely, the prescribing of tinctures of insufficient strength, lies one of the chief reasons for our lack of faith in digitalis today. All of the experimental work done by Eggleston and Pardee, was with the use of a preparation of 100 per cent strength; yet how many of us take the trouble and time to be sure that we are prescribing and getting a tincture of similar potency and therapeutic value? I daresay that all of us are familiar with the extreme instability of the average tincture of digitalis on the market, realizing only too well how quickly and easily it loses its strength when exposed to light and air! Yet, strange to say, as scrupulous and careful as we are in insisting that our vaccines and serums are fresh, most of us are utterly indifferent and careless when it comes to prescribing digitalis, one of the most notoriously unstable and easily deteriorated of all the drugs in the Pharmacopoea. The average physician, as a rule, is thoroughly satisfied to have the pharmacist dispense his prescription from some large container on the shelves for weeks or months, which bottle has probably been opened and reopened, as occasion demanded, until the preparation within has lost practically all of its



strength and medicinal value. Is it any wonder, then, that such a tincture fails to produce the desired results? Today, there is no need for any of us to gamble on the potency and freshness of our drug, for all of the larger pharmaceutical houses have on the market standard tinctures of digitalis of known 100 per cent strength, already dispensed in small individual containers which have never been exposed to light and air until opened for the first time for our own individual patient. The advantages derived from insisting on such a preparation for our cardiac cases are self-explanatory, and need no further comment.

In the third and final category, namely, inadequate dosage of our drug, lies another common cause for lack of confidence in digitalis. When called in consultation on cardiac cases, I invariably find that the dose given is entirely too small to produce the desired results; and that therefore again the criticism lies with the physician rather than with the drug itself. A very easy and practical way to estimate proper dosage in the administration of digitalis is to employ a modified method of Eggleston's—as follows: Multiply the body weight in pounds, by the constant .14, and this result represents the number of cubic centimeters of a 100 per cent tincture necessary to digitalize a patient of that particular weight. One half ( $\frac{1}{2}$ ) of this total quantity, should be given on the first day; one quarter ( $\frac{1}{4}$ ) should be given on the second day; and the final quarter ( $\frac{1}{4}$ ) on the third day, when your patient is considered fully digitalized. From then on, he is placed on a maintenance dose of approximately 2 c. c. daily, determined such, because the experimental work of Pardee has shown that approximately 2 c. c. of digitalis are excreted by the human body each day, and consequently, an equal amount should be given for purposes of maintenance. Now, let us briefly simplify with a concrete example:

If our patient weighs 175 pounds, then we multiply 175 by .14 (constant), and the result proves that it requires 24 c. c. of tincture digitalis to thoroughly digitalize a patient of 175 pounds, weight. As stated before, one half of this, or 12 c. c. should be administered on the first day; one quarter or 6 c. c. should be given

on the second day, and the final 6 c. c. on the third day. Thereafter, a maintenance dose of approximately 2 c. c. daily should be continued indefinitely.

Now in conclusion, I wish to state that I have dwelt on this subject, not with the idea of imparting anything new—but merely with the thought of emphasizing, in my opinion, the most common pitfalls responsible for the failure of digitalis in clinical work. Lastly, as a final remark, I suggest that before you institute digitalization on any cardiac case, you strive to remember the three following axioms, namely:

1. Be sure that there is a particular need for digitalis in the patient about to be treated.
2. Assuring yourself of this, prescribe a preparation of sufficient strength to warrant confidence.
3. Satisfying yourself as to proper indication, and correct medication, use in large enough dosage to accomplish results.

#### DISCUSSION

Dr. P. H. Jones, Jr. (New Orleans): In listening to the remarks of the essayist, one can only be in complete agreement with what he says. It is entirely fallacious to think digitalis is going to be helpful for the average individual in all cases of cardiac disability. This is particularly true in regard to pneumonia. The pros and cons of contest about pneumonia have been fought for three generations and probably concluded now in the following way: A group of investigators in New York treated alternate cases with and without digitalis. After extending the investigation over three years, it became evident to all that the mortality in the group that had digitalis was 16 per cent higher than in the group that did not have digitalis. That more or less proved what Dr. Dubos said, that there should be definite and positive indication for the use of digitalis before its administration; it must be expected that digitalis will do some particular thing for the function of the heart muscle.

About the various preparations being deteriorated before they are put into use, most pharmaceutical houses consider any preparation over six months old as being deteriorated. It is claimed, but is probably yet to be determined definitely, that the preparation of digitalis in the powdered leaf form may not deteriorate so rapidly. The dosage used is a dram to thirty pounds of body weight.

I agree heartily with the essayist that when digitalis is given it should be for a definite pur-

pose, to accomplish some particular effect in cardiac function.

Dr. Chaille Jamison (New Orleans): I agree most heartily with the substance of the essayist's remarks. I would like to add a little, however, in regard to the doses.

In the first place, the method of calculating the dosage and the method of dosage that Dr. Dubos has suggested is the method known as rapid digitalization, the idea being to get as much digitalis to that heart as it can bear. In a certain group of cases I believe that this is a rather dangerous proceeding. I do not think we should wed ourselves to rapid digitalization alone, particularly in the late group, the group that we define as the "senile heart," the arteriosclerotic heart. I personally do not believe in rapid digitalization in such cases, I believe in slow digitalization. Again, many of the gentlemen here have already heard me many times state my opinions and I hope I have backed them with some proof, that digitalis in the face of congestive heart failure which is due to aortic regurgitation does not effect as ready a response, or in as high a percentage, as heart failure due to other causes. The ideal conditions in which we expect a response to prompt digitalization are, of course, flutter and fibrillation, as Dr. Dubos pointed out, but also in those congestive failures which follow on, or are due to, hypertensive heart disease and to rheumatic heart disease. I try to impress the internes on my service as we handle a great deal of congestive failure due to aortic regurgitation, with the fact that digitalis is not going to give them anything like as good results as in the other conditions mentioned, and that rapid digitalization is in such cases fraught with danger. I prefer in the congestive heart failure due to aortic regurgitation to put my patients to bed, let them rest in bed for two or three days, tide them along, and then give digitalis by the slow method. It is true it is going to take a week or ten days before the digitalis exercises any effect, but in congestive heart failure due to aortic regurgitation one cannot expect good effects in more than three out of five cases, and I am thoroughly convinced after years of experience that rapid digitalization in such cases may produce sudden death, and we know that sudden death in aortic regurgitation occurs only too frequently.

Personally, when I use rapid digitalization, I give two drops for every pound of body weight and divide into three doses from six to twelve hours apart. I use it in patients young and strong and otherwise in good condition, except for congestive heart failure.

Dr. J. M. Bamber (New Orleans): Wenckebach of Vienna read a paper several years ago in Birmingham, England, and said that a long life

was too short to learn enough about digitalis, and I do not think we can get away from that yet.

I want to say only a word about the maintenance dose of digitalis. In a recent book on heart failure, the author says if you ever once need digitalis, you are going to need it the rest of your life, and I think that is practically true, and if it is, then the maintenance dose is of great importance. I disagree with Dr. Dubos a little bit in the size of the maintenance dose. I believe 2 c. c. or 30 minims daily will be too much for some cases. I have followed people—well, the longest was eleven years that a patient of mine took digitalis every day of his life after cardiac failure from auricular fibrillation—and 15 minims or 1 c. c. has as a rule held the heart rate in most cases. Some require more. I have one patient under observation now with auricular fibrillation that 15 m. or 1 c. c. daily would produce heart block in five or six days, this occurs usually in elderly people with degenerative changes in the heart, so to make this dose 30 m. or 2 c. c. would be too much for a good number of people.

Dr. John B. Elliott (New Orleans): Often when patients have very high blood pressure doctors are afraid to give them digitalis. I gave it to a man with a blood pressure of 240, paralyzed on the left side and very hard arteries, but this man had edema of legs and lungs and slight ascites, in other words marked decompensation. Should he be allowed to drown in his own fluid or run the risk of a cerebral insult? There was no question in my mind as to the correct treatment, and he was out of immediate danger in two or three days under heroic doses of digitalis.

Dr. Louis J. Dubos (In conclusion): I certainly thank all for their generous discussion of my paper, and I am glad that Doctor Elliott brought out the point I failed to mention. I did not care to enumerate "hypertension" as an indication for digitalis, but am surely grateful that he reminded us that high blood pressure should not prevent anyone from taking digitalis.

In regard to Dr. Bamber's argument, strangely enough, I was going to qualify the statement about maintenance dose myself; I said approximately 2 c. c.—but it has been my experience that at times  $1\frac{1}{4}$  c. c. were amply sufficient. I have found, in several cases, that even 1 c. c. of digitalis was the maintenance dose in some instances. Therefore, I would suggest individualization when it comes to actually figuring on a specific maintenance dose. Our idea is to give the minimum amount of digitalis necessary to digitalize that particular heart. Consequently when we find we can get along with 1 or  $1\frac{1}{2}$  c. c., that certainly should be the maintenance dose in that case.

Concerning weight, naturally when we compute the weight of our patient, we should make due allowance for edema. This is generally accom-

lished by inquiring as to the average normal weight of the individual, before the anasarca developed, and this poundage is considered accurate enough to estimate our digitalization.

### HEART DISEASE IN MIDDLE LIFE\*

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If one consults the mortality statistics of the United States Census Bureau and of the various large life insurance companies of this country, it will at once become apparent that heart disease in its various manifestations is the first in the order of the causes of death and, I am inclined to think, among the first in the amount of damage it does through disability and invalidism. It is with this in mind that I undertake the present discussion.

The discoveries of modern medicine and the development of the public-health movement have brought one infectious disease after another under control, but today the emphasis is shifting from the infectious diseases to the degenerative conditions of middle life of which those affecting the heart are at the head of the list. It is high time that public interest should be directed to the problem that is rightfully ours but certainly one in which the public, too, should feel some concern. If one accepts the figures as computed by the United States Census Bureau and other sources, the death rate from heart disease was approximately 132 per hundred thousand of population in 1900, while in 1932 it was 224 per hundred thousand; an increase of 92 per hundred thousand. This is proof, undeniable, that heart disease is more prevalent now than it was two and three decades ago and it seems likely that the pre-eminence of heart disease as a cause of death will increase rather than decrease as time progresses. The gradual improvement in the death rate for such diseases as tuberculosis, pneumonia, and others that are coming under control, will transfer many additional persons to the later ages of life when heart disease is likely to strike them down.

It must be admitted, too, that the medical

profession is none too well organized to control heart disease, whereas its efforts to combat and control tuberculosis and cancer are at this time productive of results which have done much to lower the death rates for those diseases. Just as the prevention and control of tuberculosis constituted a major problem for the medical profession a few years ago, so does heart disease constitute a problem today which it is the duty of the profession to attempt to solve. Donald B. Armstrong, M. D., Third Vice-President of the Metropolitan Life Insurance Company, and Louis I. Dublin, Ph. D.,<sup>1</sup> and Statistician of the same Company, said recently that on a conservative estimate, the number of persons suffering from heart disease in the United States is probably close to two millions. Other observers place the number so affected at four millions and some even at five millions. If the latter figure is approximately correct about four per cent of the population of this country is living under the physical handicap of heart disease, making the problem one of the utmost importance.

Under the present conditions of mortality, one out of every five white males born will eventually die from that disease. The proportion is slightly larger for white females, and the chances of dying from heart disease are not only greater than from any other single cause, but exceed those for tuberculosis and cancer combined, whereas tuberculosis two decades ago was at the head of the list as a cause of death. It is conservatively estimated that in the United States approximately two hundred thousand persons die of heart disease each year. The truth of this statement places an enormous responsibility on the medical profession and it is our duty and should be our purpose not only to use but to add to the existing knowledge of the disease, devoting time and effort to discover the causes and adopting such measures as are indicated in correcting them, thereby reducing the incidence as well as the mortality rate from this disease. It cannot be denied that the economic loss to the community from heart diseases is enormous; it is a fruitful source of incapacity; only rheumatism exceeds it in this respect; it causes impoverishment and family breakdown, claiming far too many young and middle-aged victims. Sixty-

\*Read before the Louisiana State Medical Society, New Orleans, April 29-May 1, 1935.



eight per cent of all heart disease deaths, in the experience of the Metropolitan Life Insurance Company, occur before the age of 65 years.

#### CAUSES OF HEART DISEASE

Within recent years, due in most part to the rapid increase in the incidence of heart disease, the etiology or cause of this disease has been and is being more carefully studied. This is the most intelligent method of considering the problem and should make us more hopeful of the future. It is now a fairly well established fact that approximately 90 per cent of all heart disease is caused by four conditions, viz:—rheumatic fever, hypertension, arteriosclerosis and syphilis. The remaining 10 per cent is accounted for by such causes as congenital defects, infectious processes, toxins and a few unknown factors. The etiology becomes further complicated by the lack of definite and positive knowledge of the cause or causes of the first three of the conditions named. The cause of the fourth is well known. One of the earliest studies on the causes of heart disease, as they are now classified, was made by Cabot<sup>2</sup> in 1914. He studied 600 hospital cases in which a failing heart was the most notable feature. He found the following: 45 per cent of the total caused by rheumatic disease; arteriosclerotic type and hypertensive heart disease 34 per cent; syphilitic heart disease 12 per cent; thyroid heart disease 1 per cent, and heart disease of unknown origin 5 per cent.

Wyckoff and Lingg,<sup>3</sup> in 1926, made a study of 1001 cases of heart disease in which 85.4 per cent were among cardiac clinic patients and 14.6 per cent among private cases. Their figures follow: rheumatic heart disease 25 per cent; arteriosclerotic heart disease 40 per cent; syphilitic heart disease 10 per cent; heart disease of unknown cause 10 per cent. Munly,<sup>4</sup> in 1928, analyzed 1300 cases of heart disease made up for the most part of patients attending a cardiac clinic and hospital bed patients. He summarizes his conclusions as follows: the rheumatic type comprised about 35 per cent of the total; the arteriosclerotic type 33 per cent; the syphilitic type 8.5 per cent, and unknown heart disease 20 per cent. It is noted that the percentages as arrived at by the above named investigators differ, but the difference

is not great and might be explained on the basis of incidence for different parts of the country, for it is a well known fact that there are variations in the frequency of individual types in different localities. I am of the opinion that in the South the arteriosclerotic type is by far the most prevalent among the white population. The syphilitic type is probably a more frequent cause of heart disease in the Negro population. Serious as the heart disease situation seems today, because of incidence and an increasing mortality rate, there are certain factors that offer encouragement and merit attention. The principal of these is the decline in mortality from chronic valvular disease. The decline is most marked among young persons, with present death rates at ages under 25 years barely half of what they were in 1921. At ages above 25 years and up to 45 years there has also been substantial improvement.

Chronic heart disease of this type is largely due to bacterial invasion and results as a complication of such diseases as rheumatic fever, syphilis and the communicable diseases of childhood. Not a great deal of progress has been made in the control of the first but, as a result of a better knowledge of disease prevention and the good work being done by health boards and public health movements generally, communicable diseases are gradually being brought under control and accordingly fewer people are victims of valvular heart disease. In marked contrast with these favorable trends, is the increasing mortality rate from diseases of the heart muscle, coronary disease and angina pectoris, the last two named being the more prevalent in people in the middle decades of life and are closely allied. Arteriosclerotic heart disease is found very infrequently before the age of 40 years, but after that age constitutes a large and increasing proportion. Between 40 years and 50 years, about one-sixth of the cases are of this type; between 50 years and 60 years, about one-half. This may be the result, in some measure, of the increasing stress and strain of modern life plus a deplorable lack of interest in physical welfare exhibited by so many individuals.

#### MYOCARDIAL DISEASE

Reviewing briefly the types of heart disease

under discussion and their cause, it will be seen that myocardial diseases constitute a most important type. Its principal manifestation is an increase in the size of the heart which enlargement may be a hypertrophy or dilatation or both. The causes may be valvular disease or the strain put on the heart by hypertension, and, since there seems to be an improvement in the diseases causing the first and an increased incidence as regards the latter, it is the latter that commands attention. It has been said that 60 to 70 per cent of individuals with so-called essential hypertension are destined to develop myocardial insufficiency and to die of heart failure. This is due to the greater load that a heart must carry where a hypertensive background exists and sooner or later it becomes exhausted and ultimately fails. This condition is found to exist at this time in an increasingly large number of individuals in middle life and it is with this fact that we should feel the most concern. Such early manifestations as dyspnea on exertion, mild attacks of cardiac asthma, puffiness about the ankles, should be ascribed to heart failure rather than to kidney or liver disease and a careful examination is indicated. The death rate from this disease has exhibited an exceptionally rapid rate of increase during the past decade, as proved by figures published by the Statistical Department of the Metropolitan Life Insurance Company, the upward trend reaching its peak at 50 years of age.

#### ANGINA PECTORIS

Angina pectoris presents a group of symptoms that are so typical and so easily recognized that there should be no difficulty in making a diagnosis. The disease is predominantly one of men and this characteristic has become greatly emphasized in the past decade. The patient, following such effort as walking or following moderate or strenuous exercise such as playing golf, has a sense of tightness or pressure in the sternal region which may become an agonizing pain, radiating to the neck, shoulder, arm, usually the left arm. His suffering and his consciousness of the gravity of the condition compel him to stop. It is the opinion of a majority of medical men at this time that the underlying pathologic lesion is a narrowing of the coronary artery generally caused by arterio-

sclerosis. As a result of effort on the part of the individual there is a demand for an increase of the blood supply to the myocardium which cannot be met in a normal way, the result is an ischemia with pain as its manifestation. As to the seriousness of this condition there is no disagreement. While occasional recoveries are recorded and a few patients live many years, a large percentage die, some suddenly, others within two to four years, from the first attack. In a study of the causes of sudden death, Hamman,<sup>5</sup> who has reviewed statistical observations, says that of the deaths from sudden heart failure sixty-five per cent are due to diseases of the coronary arteries. Nothing is so awe inspiring and dramatic as sudden death, and before the knowledge of heart disease which we now possess was acquired, sudden death was a matter of conjecture. Coronary thrombosis is now our first thought.

One cannot view with unconcern the ending of a life in its fourth or fifth decade, at a time when one's ability to be productive is at its height, when he can serve his community and his family best. Because of this increasing toll taken by heart disease the world is deprived of thousands of men and women of great power and importance.

Saner and more temperate living on the part of all, with due regard to rest and exercise, must result in healthier bodies better prepared to avoid heart impairments; over strenuous activity and speed mania must be curtailed, hours of work reduced, responsibilities and worries should be eliminated so far as is possible, correct habits of eating and drinking must be followed. Of special importance and probably the most promising of all personal efforts will be the development of the habit of periodic health examinations when many heart lesions in their early stages could be thus detected enabling affected individuals to derive the benefits of prompt treatment and of suitable alteration in their mode of life.

#### DISCUSSION

Dr. John B. Elliott (New Orleans): Everyone agrees that there has been an enormous increase in heart disease in the last ten years, especially in the anginal and coronary forms. What is the cause of this increase? Infectious diseases are decreasing and thanks to the pediatrician and the

health boards, there are fewer cases of diphtheria than in the last forty years. As regards rheumatic fever we see very few cases; they seldom occur in private practice in the South, though they occur in cold and damp climates. A very helpful thing in decreasing heart disease has been tonsillectomy—there have been more tonsils taken out in the last twenty years than in the past two hundred. Most important of all, syphilis has decreased enormously in the last few years because it is recognized earlier and treated better.

Why, therefore, this increase in heart disease? The increase today is due to the world depression, causing thousands of deaths; men leading sedentary lives are dying from angina and coronary thrombosis due to anxiety and worry. I had a remarkable case recently of a man who came into the office to be examined. I found his blood pressure 130 over 80; his heart was not bad, his arteries not hard. I gave him no medicine. He came back in eighteen months to be examined and his pressure had gone up ninety points systolic and twenty diastolic. I asked him what had happened. He said nothing, he lived in the same house, drank the same whiskey and ate the same amount of food. I told him his blood pressure had gone up ninety points. Then he told me he had gone through two failures in one year. In other words, anxiety and living under a constant strain had been the cause of his trouble.

One more thing that some have forgotten, the world-wide epidemic of influenza. A lot of men of middle age have angina left over from 1919. They recovered, but they recovered slowly and for the rest of their lives are paying for that influenza in 1918 and 1919.

The next thing is the automobile. Talking to some of my students, I asked them how long since they walked a mile. They almost unanimously agreed that they never walked if they could get a ride. Doctors ride and ride, and walk about a mile a month. I asked one doctor how far he lived from his office, and he said about four blocks. I asked how long it had been since he walked it and he said about a year.

The next question is what are you going to do about it? A man comes to you with a pressure of 200 systolic and 100 diastolic, a little dyspnea, and no other physical signs. What are you going to do with this man? Look up syphilis, make several Wassermanns, make spinal examination if necessary. Should you find syphilis you can help him with potash and mercury, but otherwise it is all a question of diet and rest, and no over-exercise. I deeply object to all the new fads of reducing pressure.

The same question about food. All of us eat too much and do not walk enough. The question of exercise comes up all the time at my office. "Can I play golf?" I answer "Yes". It does not do any harm if there is no myocardial disease, and

especially if a person has a low diastolic pressure. I always add that if the quality of his golf is as bad as mine there is no harm possible.

As to hypertension: We make too much of hypertension. I do not care a rap about hypertension provided a man has a low diastolic pressure. The lady next door to me died at ninety-four and she had a pressure of 260 when sixty-five years of age. At that time the family and I agreed she would not live more than three months, but she had a low diastolic pressure.

As to prognosis, I used to think coronary thrombosis was worse than angina pectoris, but I have had several cases of coronary thrombosis with high blood pressure, dyspnea and pericardial rubs every night. They are living today, but of course, they had to go to bed anywhere from one to ten months when first stricken. They must stay in bed not weeks but months. They generally have some chance in coronary thrombosis to reestablish circulation.

Do not be afraid of digitalis. If the patient has edema of the feet and lungs the heart must have help. In other words, disregard high blood pressure if there are signs of decompensation.

Dr. J. M. Bamber (New Orleans): I get the impression in reading and hearing people talk that everybody does not seem to grasp the exact meaning of these cases of heart disease in middle life. One writer or speaker will say "hypertensive heart disease" and another will say "arteriosclerotic heart disease", maybe meaning the same thing, and some people are under the impression that arteriosclerosis and hypertension are synonymous terms. I think the best way to look at them is this, there is a pure type of arteriosclerotic heart disease. There is a pure type of hypertensive heart disease, and there is the individual who has both things. That is the way I look at each person with whom I come in contact professionally in this so-called heart disease, or degenerative heart disease, that is responsible for a majority of cardiac deaths in middle and old age.

What do you mean by pure arteriosclerotic heart disease? I have seen numbers of people die with angina, die with coronary occlusion, who never had blood pressure above 110 in their lives, whose hearts are enlarged maybe, probably most of them normal in size and you examine them probably the day before they drop dead and you would pass them for life insurance,—you all know why. They may have generalized arteriosclerosis, or maybe arteriosclerosis in one small portion of a coronary vessel not bigger than a little finger nail. Heart sounds are normal, blood pressure is normal, as is everything else. That is the pure arteriosclerotic heart disease.

What is the hypertensive heart disease? A person gets hypertension in early middle life. They do not all go to the end of the story, but when they do they have enlarged hearts, that is, the



heart that belongs in the 700 to 800 gram class. How do they die? What happens to them? They do not have pain, they have congestive failure. They die after weeks in bed, with fluid in all cavities of the body and shortness of breath. The first type, the arteriosclerotic, are the fellows who have the pain—angina pectoris, coronary occlusion. The hypertensive type die from heart exhaustion.

What do you see in the two different types at post mortem? The arteriosclerotic type has a large amount of fibrosis in the heart muscles and the coronary vessels show changes, some occluded, some not quite closed. The hypertensive type of heart has a great big ventricle, so that it looks like beef steak.

To my mind it is not the same disease and requires different treatment.

A large number of them come to the end of the trail with the two things. They start out with hypertension and develop arteriosclerosis. They may have angina, may have coronary occlusion, and they may drop dead, then on post mortem we see a big heart plus coronary changes. I read an article by some one who said, after reviewing a large number of cases, that we were unable to draw the distinction between hypertension and arteriosclerotic heart disease. I do not see why. They can have pure arteriosclerotic heart disease or hypertensive heart disease, and in a large percentage we see the two things in the same individual.

Reading sometimes, I get the impression that most people think arteriosclerosis goes with hypertension. I am beginning to think arteriosclerosis is one thing and hypertension another, and some day some one will prove they have nothing to do with each other, so I think when you go to solve the problem it is best to get oriented with what you are dealing.

Dr. Chaillé Jamison: They say doctors never agree—I want to say I agree with Dr. Bamber 100 per cent. I have nothing to add to what he says.

Dr. H. Guy Riche (In conclusion): There is very little I wish to add to what has been said. I think all of us are pretty much agreed on what causes heart disease. Dr. Jamison said he agreed with Dr. Bamber 100 per cent. He did not say he agreed with me but I believe he does. One of the things I consider deplorable is the utter lack of interest shown by the laity in periodic health examinations. People have their automobiles examined regularly, but neglect the most important and the most complicated machine on earth, the human machine. If I may be forgiven for making a personal reference, I will say that I belong to a civic club in the city in which I live, Baton Rouge. A year ago, in order to be of service to my club and to its members, I offered that I would examine the heart, take the blood pressure and

test the urine of any member of that club who would come to me on his birthday. I also said that I would do that without charge and that I would refuse to treat any member of that club who was found to have a physical impairment and who was not a regular client.

The club has a membership of approximately seventy-five members and though my offer was repeated on several occasions, five have appeared for examination thus far.

Very material benefit could be expected to accrue from periodic health examinations. Heart impairments could be detected in the early stages, proper advice given to these people and much benefit would probably be derived through appropriate treatment and suitable alteration in their mode of living.

#### REFERENCES

1. Armstrong, Donald B. and Dublin, Louis I.: Favorable aspects of heart disease. A paper presented before the Health Officers Section, American Public Health Association, Indianapolis, Indiana, October, 1933.
2. Cabot, R. C.: The four common types of heart disease. An analysis of six hundred cases, *Jour. Am. Med. Assn.*, 1461-1463, 1914.
3. Wyckoff, J. and Lingg, C.: Statistical studies bearing on problem in the classification of heart disease. *Am. Heart Jour.* 1:446, 1926.
4. Munly, W. C.: *Am. Jour. Public Health and The Nation's Health*, V. 18, 1928.
5. *Statistical Bull. Metropolitan Life Insurance Co.*, 14, 1933.
6. Hamman, Louis: Sudden death, *Bull. John Hopkins Hosp.* 55:387, 1934.

#### TRAUMATIC HERNIA\*

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The presentation of this paper for consideration of the surgical section of this society may not seem strictly pertinent as it possesses embryological, anatomical, social, medical, legal, industrial as well as surgical facets, but as the surgeon most frequently and finally has to deal with the problem, we contend that we are within the proper jurisdiction.

Hernias play an important role in the lives of all people, and present many and varied problems in their social, economic, industrial and medical activities. We will not consider all phases of the matter, nor in fact all forms of hernia, but more particularly what in modern industrial and legal usage has become

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known as traumatic hernia. To us, the term is a misnomer. To us the laity and jurists have a wrong concept of the matter, and to judge from the type of testimony of competent medical experts to whom we have listened while they were under the spell of the solemn oath, a short consideration of the problem is not amiss.

A hernia may be defined as an abnormal protrusion of a viscus in whole or in part through its retaining cavity wall. We restrict our comments to abdominal hernias and our arguments more especially to the types most frequently encountered both in clinic and in court, i.e. inguinal hernia. Before we can in equity settle the matter of liability of industry to workmen disabled through hernia, let us consider how hernias develop with the theories and facts of their origin.

There is abundant evidence that most, if not all, hernias are congenital. There is embryological evidence that this is true in a great percentage of cases, enough to lay the proper foundation for our argument, as will be presently shown, and the evidence of an heredity factor is strong enough to behoove one to choose a healthy grandfather if he is to remain whole himself. Draper and associates, in studying the history of twenty males afflicted with hernia, found fourteen or 46.66 per cent of their fathers had hernias<sup>1</sup>. Morrison relates the case history of a hernia patient whose father and paternal uncle had hernias; of his own seven brothers and sisters, four had inguinal hernias; among his four children two had hernias, and his own sister with an inguinal hernia, who married a similarly affected gentleman, the fruits of their union were four children all of whom had hernia<sup>2</sup>. Birkenfeld, writing in a German periodical, concludes after a study of the family history in numerous cases that heredity plays a dominant role in the etiology of hernia, in fact, in producing a specific kind of hernia, and variability of kind, or inherited tendencies. Thus one family had all inguinal hernias, one family all umbilical hernia, and another all varieties. He further observes that in persons with hernia manifested as stigmata of degeneration, as shown in the family history, after operations have recurrences of 11 per cent, as against a 4 per cent without such a family tendency<sup>3</sup>. We, who

practice in the South, have frequently observed that there is a racial weakness for umbilical hernia in the negro race, it being absent much more commonly in the white race. Bernstein<sup>4</sup> relates after a study of the problem that he found a decided tendency to hernia in fetuses, drawing his conclusions from autopsy studies. It is stated that the instance of hernia<sup>5</sup> is as 1 is to 14.9 in males and in females as 1 is to 44.7. With a rate determined from a study of the reports of insurance examinations, it is found that there is an incidence in males of 7.2<sup>6</sup>. Further testimony giving strong support to congenital theory is that a large percentage of hernias are recognized in the first years of life. Grazer<sup>5</sup> quotes Berger who reports 6,220 cases of inguinal hernia, 4,526 were bilateral; a common experience in all of our practice is for an inguinal hernia to develop on the opposite side, following a single hernioplasty. Where congenital hernia cannot be diagnosed at birth or early in childhood, the sac itself is congenital. This results, in numerous instances, from insufficient obliteration of the vaginal process. There is then provided a pouch more or less conical in shape, subjected to the numerous strains of increased abdominal pressure, incident to coughing, sneezing, defecation and muscular action. Ultimately, as the tense membrane before the presenting head thins and dilates the cervix, it stretches the already lax tissues and gradually there develops a hernia, noticed most likely in later years by the working person during muscular strain, and the stage is set for a so-called traumatic hernia. It is indeed a strange and a remarkable coincidence that patients seen in private practice who present an inguinal hernia can seldom tell the time and place when first noticed, and if so, they seldom attribute the hernia to a specific force, that is, trauma. It just happens.

Hughson<sup>7</sup> reports that in a series of cases in which a relaxed ring was opened, in which no clinical evidence of hernia was noted, a small persistent sac was found, concluding that a correlation of these findings gave further support to the preformed sac theory in regard to the etiology of hernia. He further states that 16 per cent of patients with hernia on one side eventually develop hernia on the opposite side. We believe recorded medical evidence is in

harmony with the belief, and in private discussion with surgical friends, they agree that most hernias result primarily from a congenital weakness or defect, and that most of them are slow in development. But, as one of our legal friends remarked, the courts are not to be too harshly criticized for the almost absurd position they have taken with reference to accidental hernias, for the fault, if any, lies in the medical profession upon whom, in all such cases, the courts are necessarily compelled to rely. The judges are only laymen where medical questions are involved and so long as doctors may be found who will give positive and emphatic testimony that a hernia is practically always caused by an accident, and is always disabling, industry will be compelled unjustly to compensate many employees who can easily prove that they acquired a hernia during the time they were employed.

At a national meeting of the Conference Board of Physicians in Industry<sup>7</sup>, a member reported a case of traumatic hernia. In the opinion of all the other members in attendance, no case of traumatic hernia had ever been known to them. It was their opinion that a true traumatic hernia is indeed rare, and of negligible importance, and that the development of inguinal hernia should be considered an occupational disease and compensation should be paid on the basis of aggravation of a preexisting condition, rather than as the result of a definite injury.

I believe that I have presented sufficient evidence to show that hernia is a common condition in the male of all ages from fetal life to old age; that heredity is a common factor in its production; that trauma per se is a negligible factor of such minor importance as to merit slight consideration; that in individuals coming within the scope of protection of the state workmen's compensation act, muscular activity associated with labor is readily proved in court as an etiological factor, a condition given small credit in the history of those not so favored. We believe that most hernias should be considered as an occupational disease of gradual development, and should be so recognized in law as in medicine, and that such conditions should be compensated for only as an aggravation of a pre-existing condition. We all

know that most hernias are correctable surgically, with only about 5 per cent failures<sup>9</sup>, and that the operation is very seldom attended with death in the absence of concomitant complications. Our position is not revolutionary or untried. Kessler<sup>9</sup> compiled, from a study of the situation in foreign countries, many of which have progressed further than we have along the road of social reform, a schedule of variable values for hernia as follows: The French jurisprudence, 10 per cent to 33 per cent total; the German jurisprudence, 10 per cent to 50 per cent total; Swedish legislation, 15 per cent total; Italian legislation, 10 per cent total; Swiss laws, 15 per cent total and Austrian imperial office, 69 per cent total.

It is noted that the larger percentages above represent estimates of disability in the presence of severe complications.

#### CONCLUSION

It is a recognized fact of common medical knowledge that untold thousands of men carry hernias throughout life, earning their living by the sweat of their brows. You have seen them, so have I. Such men are being subjected to an injustice, for industry today to protect its own interest is insisting on preliminary physical examination as a requisite to employment, and a workman is not allowed on the job who is cursed with a hernia of any degree or who has a lax or larger ring than normal which constitutes a potential hernia. Such men are capable of doing many kinds of work and but for the present ridiculous attitude of the law and courts towards the question, such men might remain useful self-sustaining citizens, maintaining their own self-respect. The whole question deserves earnest consideration by members of the profession and honest conclusions after their deliberations.

#### BIBLIOGRAPHY

1. Draper, George, et al: Studies in human constitution: clinical gynecities, *Jour. Am. Med. Assn.*, 92:2151, 1929.
2. Morrison, J. T.: Hereditary factor in inguinal hernia, *Wis. Med. Jour.*, 26:145, 1927.
3. Birkenfeld, W.: Heredity as etiological factor in hernias, *Archiv. fur Klin. Chir.*, 158:509, 1930.
4. Bernstein, P.: Tendency to hernia in fetus and young children, *Archiv. fur Klin. Chir.*, 103:3, 1914.
5. Bergmann et al: *Practical Surgery*, 5:483, 1904.
6. Lea & Febiger, N. Y.
7. Dublin, L. I., Fisk, E. L., Kopf, E. W.: *Physical*



defects as revealed by periodic health examinations, *Am. Jour. Med. Sci.*, 170:576, 1925.

7. Conference Board of Physicians in Industry-reported. *Jour. Am. Med. Assn.*, 79:2107, 1922.

8. Hughson, W.: Persistent or preformed sac in relation to oblique inguinal hernia. *Surg. Gynec. Obst.*, 41:610-614, 1925.

9. Kessler, Henry H.: *Accidental Injuries*—2nd printing, p. 413, Lea & Febiger, Phila., 1931.

#### DISCUSSION

Dr. Lucian H. Landry (New Orleans): Dr. Rand has given us a very good topic to think about, but I have no suggestion to make that will assist in clearing up the question. We know that the so-called traumatic hernia is a very bad term; the insurance companies introduced it when the compensation law was first put into effect and it was meant to describe a type of hernia which is rarely seen, if at all, and practically amounts to an evisceration.

If intra-abdominal pressure can be classed as trauma, then all herniae are traumatic, but if trauma is interpreted as external violence, then traumatic hernia is indeed a rarity.

It has been my experience that most insurance companies are willing to pay the hospital and the doctor for a hernia that develops while the man is on the job and consults the doctor within a reasonable time after the occurrence. It has also been my experience that the greater percentage of these herniae show a well formed peritoneal pouch or sac, many of them continuous with the tunica which anatomically are classed as congenital hernia.

Dr. J. C. Menendez (New Orleans): The question of traumatic hernia is one of the most serious problems that men in industrial surgery are presented with today. I believe, and I agree that many of the men who are conversant with this particular subject believe, that the condition of traumatic hernia is a rare thing. They go further, and I agree with them there also, in saying a traumatic inguinal hernia, especially of the indirect type, is an impossibility. Of course you can readily understand that with direct violence to the abdominal wall, whether the inner region or the lower or upper region, there is a possibility of a traumatic hernia, or, so to speak, a definite tearing away of the structures of the abdominal wall. I have had occasion to see only one such case which occurred several years ago in the city of New Orleans. There was a direct blow to the lower abdomen, the right quadrant, in which there was no tearing of the skin, but there was a separating of muscles, and tearing of the fascia, and the peritoneum. In this case there was extreme shock. As a matter of fact, it required hours of treatment for shock before we thought the patient would survive the particular injury.

William F. Shaeffer of New Jersey brought out

a very wonderful article describing fully his ideas and interpretation of hernia formations, in the *New Jersey Medical Society Journal*, February, 1930 issue. He and others believed that the traumatic inguinal hernia, direct or indirect, does not exist, especially of the indirect type.

The question which is also of importance from a medicolegal aspect today is the question of so-called occupational hernia. I do not think, and I believe it is the consensus of opinion of men practicing medicine today, especially in the industrial field, that the burden of responsibility for hernias should lie upon the indemnifying companies. I have been preaching this for a long time on account of my interest in this matter, of my research study of the literature, investigations, and so forth, and naturally I have taken that particular stand for a long time. Today conditions are somewhat different in my employment and practice and the type of work I do, and I still adhere to that feeling, that hernias are not only and solely contributable to occupation. Therefore, it is a question to me whether or not we would consider it an occupational disease. Why should we place the burden of proof and responsibility upon industry, when it might be caused by any effort which increases intra-abdominal pressure, whether, as Dr. Rand brought out very nicely, due to the evacuation of the bowel, coughing, the greatest offending condition I know of, or any effort whatsoever in the home, such as getting in and out of the bath tub, and so forth? Why should the burden be placed upon the insurance company? Considering the congenital pre-disposition, I would say about 25 per cent of the effort may be attributed to occupation or industry, and the balance to every day physiological and pathological effort, not to speak of what causes the increase in intra-abdominal pressure. To me it is somewhat misleading to have industry feel that it is responsible for hernia development, especially from an occupational disease standpoint.

Of course there is no sense in my going into the medicolegal aspect, for that should be taken up by a legal mind.

A question well brought out by Dr. Rand was the question of the physical examination as a prerequisite to employment which will rule out, to a great extent, herniae that are classified as traumatic or occupational.

Dr. King Rand (Alexandria): The remarks of the two gentlemen are perfectly in line with the information that you can glean from all medical literature, which varies from that found in the court room. I think the term is a misnomer, but in dealing with the field for many years, I have had the misfortune of seeing much of what I might call traumatic hernia.

# A REVIEW OF PAGES EPIDURAL ANESTHESIA WITH A REPORT OF 100 CASES\*

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During a visit to the east coast of South America this past summer I was particularly impressed with the progressiveness of the Argentine nation. Buenos Aires, the capital, has a population of two and a half million people and is as modern and more cosmopolitan than our own New York. This progressiveness which is apparent in the city's busy streets is also present in their medicine and surgery. Their doctors, all trained in their own medical school, are well informed and quick to adopt new ideas and methods.

While in this city I met Dr. Alberto Gutierrez and on his service at the Spanish Hospital I saw a type of anesthesia used which I had not seen before, and which the doctor was particularly enthusiastic about. This anesthesia, known as epidural or extradural, produces through a single puncture an analgesia sufficient to carry out any surgical procedure below the chin without entering the subarachnoid space.

Upon my return to this country I began to review the available literature on this subject and was soon convinced of its usefulness and safety. During the past month I have used this type of anesthesia in one hundred cases with very satisfactory results. Although this anesthesia is comparatively new in this country it has been in use abroad and in South America for several years and is used routinely in many clinics there.

The idea of epidural anesthesia was first conceived by Corning in 1885 but he abandoned work along these lines to devote his time to the study and perfection of spinal or subdural anesthesia. In 1901, Cathelin blocked the last spinal nerves by introducing anesthetic solutions into the sacral canal through the sacral hiatus. This type of anesthesia has been per-

fectured and is in use a great deal in gynecology and obstetrics. Laewen, Hamcourt, Schneider and Bleck and numerous others have attempted to obtain abdominal anesthesia through the injection of large quantities of anesthetic solution through the sacral hiatus and then placing the patient in the Trendelenburg position. On the whole, however, this method has not been satisfactory.

In 1921, a young Spanish surgeon, Fídel Pagés, first introduced a practical method of obtaining abdominal anesthesia by epidural nerve block. He reported 43 cases in which he had performed various abdominal operations after injecting solutions of novocaine into the epidural space. Unfortunately, the work of this enterprising young man was cut short by an untimely death. For ten years there appears no report of Pagés type of anesthesia. Then in 1931, Dogliotti of Turin, Italy, reported a series of cases before the Italian surgical society in which he claimed authorship of a new type of anesthesia. Upon comparing the reports of Pagés and Dogliotti one is struck with the marked similarity of their work. However Dogliotti does not mention Pagés and I prefer to believe he did not know of his work. Dogliotti's article was published in 1933. The first mention of the use of epidural in this country was by Soresi of New York. This was followed by a report by Harger of Chicago of a series of 150 cases using Dogliotti's technic with very satisfactory results. He particularly stresses the ease of administration and safety of the method. Hess, of Erie, Pennsylvania, following a visit to Lichtenberg's clinic in Berlin, where epidural is used routinely, reported in 1934, 75 cases of urological surgery in which epidural was successfully used. He concluded, "It is perhaps the safest of all anesthetics to use."

Gutierrez in Buenos Aires has had a very wide experience with this anesthesia. During the past four years he has seen the anesthetic used in several thousand cases. On his service it is used in preference to all other methods of anesthesia. One of his assistants, Vincent Ruiz, reports 1431 cases from Gutierrez's service at the Spanish Hospital in which epidural was successfully used. There were only two

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fatalities in this series, both in people over sixty years of age. One case had a mitral stenosis, the other a marked arrhythmia. In either case it is possible that the anesthetic was not at fault.

I do not wish to present this method of anesthesia as ideal or the goal toward which we have been striving since the discovery of chloroform, but I think its safety, effectiveness and simplicity of application should be called to your attention.

In order to understand the technic of giving and effecting this anesthesia let us first consider the anatomy of the spinal canal and its contents. The spinal cord is contained in a cavity formed by the spinal vertebrae and the interposed cartilaginous disks, these being held in place by the strong interspinous ligament. Closely enveloping the cord is the pia mater outside of which is the arachnoid and dura mater. Between the pia and arachnoid is the subarachnoid space in which is contained the cerebro-spinal fluid. It is into this space that anesthetic solutions are introduced to obtain spinal or subarachnoid block. In order to reach this space one must pierce the dura and

arachnoid membranes. Outside the dura is another space which until recently gained very little attention. This space, known as the epidural space, lies between the dura mater and the "periosteal" lining of the spinal canal. This lining is not a true periosteum but is a definite layer of dura, because it covers the cartilaginous disks as well as the spinal vertebrae. It has its origin just within the foramen magnum where the cranial dura, after its attachment, splits, forming the dura mater and this outer dura just mentioned. Between these two layers of dura there is this definite space which is filled with fatty tissue and a plexus of veins. The space extends from just within the foramen magnum to the bottom of the spinal canal. It becomes larger as we descend the canal until at the level of the second lumbar vertebra it occupies approximately one half of this cavity. At this level the spinal cord has tapered off

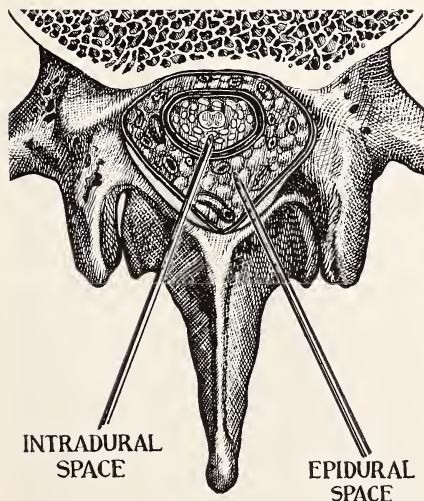


FIGURE I

Transverse section of spinal column at level of 2nd lumbar vertebra. Showing relative sizes of intra-dural and epidural spaces. Needles show difference between spinal and peridural injection. Note fat and venous plexus filling epidural space.

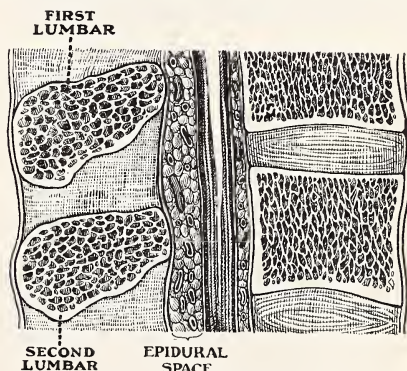


FIGURE II

Longitudinal section of spinal column at level of first and second lumbar vertebrae. Note size of epidural space, intra-dural space and cord.

forming the conus medularis and just below here ends in the filum terminale.

The epidural space has been explored in the cadaver and after injection of opaque substances roentgen rayed in the living patient and found to be definitely a closed space. Pagés, Dogliotti and Guttierrez all report work along these lines. The methods they used include roentgen ray following lipiodol injection, dissection on the cadaver after injecting colored solutions into the epidural space and the analysis of spinal fluid for novocaine following





FIGURE III

Roentgen ray of lumbar spine following injection of 10 c.c. lysidal at 2nd lumbar interspace into epidural space. Taken five minutes after injection. Note distribution of lysidal in epidural space and its infiltration out through the foramina along nerve roots.

the injection of this solution into the epidural space. Their conclusions were that there is definitely no communication whatsoever between the intradural or subarachnoid and the extradural or epidural spaces. Since this is definitely true it is impossible for an anesthetic substance injected into the space to reach the medulla or the cranial nerves.

Now that we have reviewed the anatomy involved and rediscovered a space I am sure many had forgotten, let us see how this space has been utilized. We know that all the spinal nerves must pass through this space upon emerging from the dura. Pagés found that when he introduced anesthetic solutions into the epidural space he caused a block of those nerves in which the solutions came in contact and was able to carry out any type of surgical operation upon the abdomen or chest.

#### MATERIALS NECESSARY:

The equipment needed is very simple and present in every hospital. It includes:

1. A 20 gauge short bevel spinal needle.
2. A 2 c. c. syringe and hypodermic needle for producing a skin anesthesia at the site of puncture.
3. A 20 c. c. syringe for injecting the novocaine solution.
4. 50 c. c. of a 2 per cent solution of novocaine in normal saline, preferably prepared just before injected.
5. A large medicine glass.
6. A small glass adapter of the type used for connecting rubber tubing to infusion needles.

With this sterile material on hand the patient is placed on one side. The body is brought to the edge of the operating table with the back bowed out. The knees are flexed and the head is brought down. The shoulders and hips should be in a vertical line for tilting of either results in the "corkscrew spine" and makes the puncture difficult. If the operator is accustomed to the patient sitting up the puncture may be carried out just as well in that position. The lower back is cleansed with ether and painted with tincture of iodine. The second lumbar interspace is then located by palpation and marked with the thumbnail. At this site, using the 2 c. c. syringe, an intracutaneous injection of a small amount of novocaine solu-

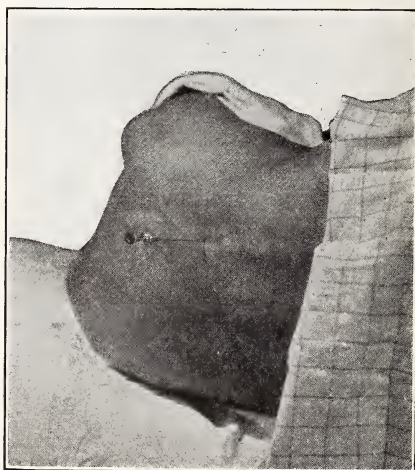


FIGURE IV

Patient in position with spinal needle in place ready for injection of solution at level of 2nd lumbar interspace.

tion is performed. Through this wheel the 20 gauge spinal needle is introduced until it engages in the interspinous ligament. The stylet is then withdrawn and the glass adapter filled with novocaine solution is placed on the end of the needle. The needle is then slowly pushed through the interspinous ligament until its tip enters the spinal canal. At this point a snap is felt and at the same instant the solution in the adapter is sucked into the needle. This is the conclusive evidence that the point of the needle is in the epidural space. The fact that there is a negative pressure in this space causing the sucking in of the solution was first recognized by Guttierrez. He placed a drop of water in the top of the spinal needle and called this indication "the sign of the drop." It was upon Dr. Graffagnino's suggestion that I began using the glass adapter which makes the movement of the solution easier to note. With a water manometer I measured the negative pressure in the epidural space of a number of patients and found it to vary from minus 10 mm. of water to minus 52 mm. of water. This apparently accounts for the fact that in some individuals the solution in the adapter is completely absorbed while in others it oscillates only slightly.

With the spinal needle in place the 20 c. c. syringe is connected to it and an attempt made to aspirate. If the point of the needle is in the epidural space nothing can be aspirated. This is done to be sure that the point of the needle has not gone on through the epidural space and punctured the dura and subarachnoid thus entering the intradural space. If such is the case spinal fluid will be aspirated. Should it happen that the subarachnoid space has been entered one need not be alarmed. The needle is slowly withdrawn until spinal fluid can no longer be aspirated.

At this point another precaution is carried out which should completely obviate the possibility of an accident from subdural injection of the solution. With the large syringe 8 to 10 c. c. of the 2 per cent novocaine solution is injected. Then a period of five minutes is allowed to elapse before giving the remainder of the solution. At the end of this time if numbness of the lower extremities is not present one can be sure his needle is not in the subdural space and can proceed with the injection of the remainder of the solution. The injection should be easy, meeting no more resistance than in doing an intravenous injection. If the 8 or 10 c. c. of 2 per cent novocaine has been ac-

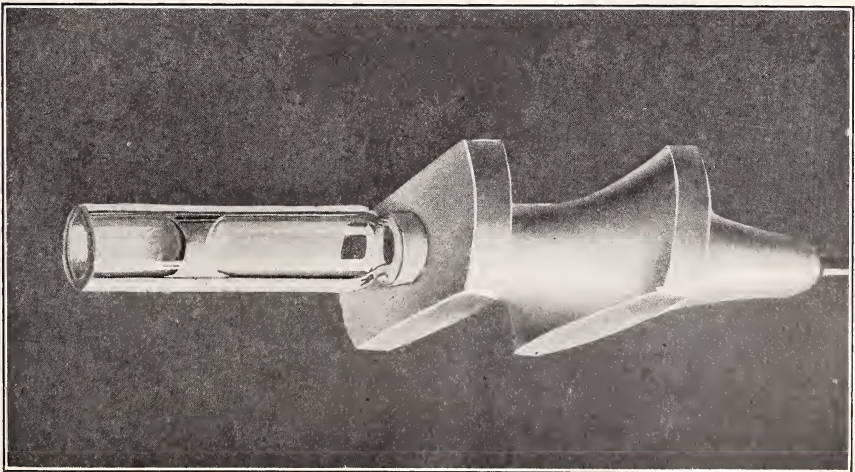


FIGURE V

Spinal needle with glass indicator in place partially filled with water. Negative pressure in epidural space draws the water inward.

cidently given into the subarachnoid space an ordinary spinal anesthesia will result, the dose being 160 or 200 mgs. of novocaine.

Following the injection of the solution the patient lies flat upon the table. If the operation to be performed is upon the pelvis or lower extremities the patient is placed in Fowler's position to facilitate the gravitation of the solution downward and blockage of the sacrococcygeal nerves. If on the other hand anesthesia of the upper abdomen, chest, neck or upper extremities is desired the patient is immediately placed in Trendelenburg position to cause the anesthetic solution to gravitate upward. In operations upon the lower abdomen as hernioplasties or appendectomies the patient is allowed to remain horizontal, for the nerves supplying the lower abdomen emerge at or near the sight of puncture.

Many of you are perhaps wondering why we do not inject the solution into the space at the level where anesthesia is desired rather than trust to gravitation of the fluid. Such a method was used by Dogliotti, but there are several reasons why the second lumbar interspace is the most desirable site for puncturing the epidural space:

1. At this level the epidural space is large, occupying approximately one half the diameter of the spinal canal. Thus it is easier to enter and there is little danger of puncturing the dura.

2. The spinal processes come off horizontally in the lumbar region and with the back arched there is a definite widening of the interspace and the puncture can be made easily and painlessly. In the dorsal and cervical spine the processes come off vertically.

3. The cord is extremely small at this level and is in little danger of being injured should one accidentally puncture the dura.

4. From the level of the second lumbar vertebra it has been found by observations in several thousand cases that anesthesia of any desired level can be obtained by taking advantage of gravity.

#### WHAT ANESTHETIC TO USE

Pagès in his work reports using 1 per cent, 1.5 per cent and 2 per cent solutions of novocaine. He obtained best results and more

complete anesthesia using the 2 per cent solution. In Guttierrez's early work he used a 1 per cent solution and reported several cases of incomplete anesthesia. Dogliotti used 1 per cent, 1.5 per cent and 2 per cent novocaine and nupercaine in .2 per cent and .1 per cent solution. He found that nupercaine was slower in taking effect than novocaine but had a more prolonged action. Hess, in his urological cases, used a 1 per cent solution of novocaine following the technic of von Lichtenberg of Berlin. He reports a number of cases in which the patients complained of discomfort but no pain during the operation. It is probable that these same patients would have been more comfortable had 2 per cent novocaine solution been used.

Guttierrez states that since using the 2 per cent solution of novocaine in physiological salt solution he has had no difficulties in obtaining complete anesthesia. He injects 40 to 50 c. c. of this solution to which 1 c. c. of adrenalin has been added. The adrenalin causes a vasoconstriction of the vessels in the area injected and thus, by slowing up the rate of absorption of the novocaine solution, prolongs the anesthesia. He states that by this method an anesthesia of one hour and a half to two hours is obtained.

In the 100 cases in which I have used this method I have obtained very satisfactory results and found Guttierrez's observations to be true. These cases include a wide variety of abdominal and gynecological procedures. In the majority of cases 50 c. c. of 2 per cent procaine was used. However, several appendectomies and hernioplasties were performed using 25 c. c. of 2 per cent solution. A very convenient method of making up the solution at the time of operation is available and should be used in preference to a stock solution of 2 per cent procaine. Sterile 5 c. c. ampoules of concentrated novocaine solution are on the market which, when added to 45 c. c. of sterile normal saline, will give 50 c. c. of a fresh 2 per cent novocaine solution. The adrenalin used should also be fresh and any discolored solution discarded.

During the injection of the solution the patient should have no discomfort. Following



the injection he may state he has a slight feeling of dizziness or peculiar feeling in the head. This is probably due to the adrenalin as this complaint was absent in those cases where the adrenalin was omitted. Following the injection of the solution the time should be noted and a period of fifteen to twenty minutes allowed to elapse before beginning the operation. The anesthesia will first appear in the lower abdomen as the nerves nearest the site of puncture supply this area. It will then spread slowly down or up depending upon which position the patient is placed in. In pelvic work it is sometimes necessary to wait twenty-five or thirty minutes to get anesthesia of the perineum. Gravity can be used to great advantage in this type of anesthesia. It is possible to limit the anesthesia to below the costal margin where 30 to 40 c. c. of solution has been injected by tilting the patient in Fowler's position. Such an anesthesia is desirable in lower abdominal or pelvic work. When 50 c. c. of solution is injected and the patient placed in Trendelenburg position the anesthesia usually extends up to the clavicle. However, it is not uncommon for the anesthesia to spread up to the inferior maxilla. These patients are not in the least uncomfortable and their respiration is in no way impaired.

#### MANAGEMENT OF PATIENT

The results of this anesthesia, as any other type of nerve block, depend a great deal upon the proper management of the patient. He should be told several days ahead of the operation of the type of anesthesia that is to be used, its advantages and the sensations he is likely to experience. One hour before the operation he should be given  $\frac{1}{4}$  gr. of morphine and 1/150 gr. scapalomin. These drugs will tend to allay fear and apprehension. During the operation an assistant or anesthetist properly trained in the psychologic management of patients should always be at the head of the table. Such an assistant will take a great burden from the surgeon's shoulders as well as make the patient comfortable and unapprehensive. Often they will succeed in absorbing the patient's attention to such an extent that he will not know the operation is in progress. The surgeon and his assistants should also be care-

ful about talking and making noises with instruments as the patient is in complete control of all his senses and easily excited by anything of this sort. Another point which cannot be stressed too strongly is for the surgeon to wait fifteen or twenty minutes before beginning the operation, as too early a start, before anesthesia is complete, may cause the patient to be apprehensive throughout the operation.

In the 100 cases observed by myself the ages of the patients varied from 16 to 68. The operations included a variety of abdominal procedures, among them gastroenterostomies, gastrotomies, appendectomies, e n t e r o—enterostomies, hernioplasties and the gynecological procedures included supravaginal hysterectomies, vaginal hysterectomy, conization of cervix, colporrhaphies and perineorrhaphies. In one case an umbilical hernia was repaired and a tumor mass was removed from the left breast. A number of these cases were poor risks for any type of anesthesia. In all of the cases in this series some degree of anesthesia was obtained. Ninety of the cases had excellent anesthesia. In the remaining 10 cases the following results were obtained:

In two cases one c. c. of ephedrine sulphate was substituted for the adrenalin. The resulting anesthesia was unsatisfactory because of a very prolonged onset of the effect.

In three cases the anesthesia wore off after an hour and the operations had to be finished under general.

In four cases the patients were highly excitable and apprehensive and complained of pulling when the viscera were handled. In all of these cases there was complete relaxation of the abdominal wall and a first degree gas anesthesia was sufficient to carry out the operative procedure.

The remaining case was that of a negro male 53 years of age who had a ruptured appendix of 9 days' duration. The peritonitis was localized with abscess formation in the lower right quadrant. He was very emaciated and had been vomiting for a week. Seven minutes after injection of the anesthetic he went into shock. He was given adrenalin and artificial respiration and after fifteen minutes began to show signs of recovery. In thirty minutes he

had completely recovered and appeared to be in as good condition as upon his admission to the operating room. However, because he had reacted to the anesthetic so poorly, it was decided best not to operate upon him. He was returned to the ward and treated conservatively following Ochsner's technic. He has completely recovered and is ready to leave the hospital. As to the cause of this accident it is my opinion that I gave at least part of the 50 c. c.

of the 2 per cent novocaine solution intradurally. It was my tenth case and up to this time I had not taken the precaution of waiting five minutes after the injection of the first 10 c. c. of the solution. The only other explanation I can offer is that it is possible this patient was hypersensitive to novocaine or adrenalin.

I followed the cases in this series closely using the following chart:

House Surgery Charity Hospital of La.  
Epidural Analgesia

Date:		Operative Procedure:	
Name:		Address:	
Ward No.:	Service No.:	Age:	Sex: Race:
Blood pressure before operation:		Pulse:	
Anesthetist:		Dose given:	
Sight of puncture:		Position of patient:	
Initiation of analgesia:		Time of beginning operation:	
Reactions: Paleness	Sweats	Nausea	
Vomiting	Anxiety	Syncopal state	
Respiratory disturbance			
B. P. and Pulse 10 minutes after giving Anesthetic			30 min
P. P. and Pulse 20 minutes after giving Anesthetic			40 min.
State of Motility:		Limits of Analgesia:	
Was muscular relaxation complete?			
Was visceral quietude present?			
Was there relaxation of sphincters?			
Time operation finished:			
Blood pressure after operation:		Pulse:	
Post-operative reactions: Headache		Nausea	Backache
Vomiting		Ability to void	
Remarks:			

The blood pressure rises ten to fifteen mm. of mercury following the injection of the solution. This is apparently due to the adrenalin in the solution as the rise was absent in those cases where the adrenalin was omitted. Ten minutes after the injection the blood pressure had returned to normal. In those cases where the anesthesia did not extend above the

costal margin there was little or no fall in blood pressure. Where the anesthesia extended up onto the chest and neck the drop in pressure was gradual and at the end of twenty minutes varied from twenty to thirty mm. below the normal systolic and ten to twenty mm. below the normal diastolic. In none of the cases observed did the pressure fall to such an

extent as to cause the patient discomfort or worry about his well-being. The patients in general were very comfortable during the operation. Only five cases complained of nausea, and two of these vomited small amounts during the operative procedure. The pulse remained regular and full in all cases, there being a slight increase in rate after opening the peritoneum. All of the patients retained the ability to some extent to move the legs and arms in spite of sensory anesthesia of these parts.

Postoperatively I noted no complications. There was no nausea or vomiting. Three cases complained of slight headaches and three of pains in the back. One of the outstanding things noted postoperatively was the ability of these patients to void voluntarily. Not one case in the series required catheterization.

When epidural anesthesia is compared to other types of anesthesia its advantages are readily seen. It has all the advantages of spinal without many of its undesirable features. There is no danger of injuring the cord for the dura is not punctured, bulbar accidents cannot occur because the anesthetic solution cannot reach the medulla, spinal anesthesia affects the central nervous system while epidural blocks only the nerve roots. Since the meninges are not pierced there is no possibility of infecting them; blood pressure changes are less marked than in spinal; patients are more comfortable and do not vomit as often as in spinal, and lastly the patients are more comfortable post-operatively and can void voluntarily.

When compared to general it is less toxic and the patients are more comfortable post-operatively. Many poor risk patients in which general anesthesia is contra-indicated can easily take epidural.

#### CONCLUSIONS

1. Epidural anesthesia has not been given the attention in this country it deserves.
2. It is the safest of all anesthetics in use at the present time.
3. It should be part of the armamentarium of every surgeon.
4. It is easy to administer.
5. Any type of operative procedure below

the chin can be performed under epidural anesthesia.

6. Post-operatively the patients are more comfortable than after any other anesthesia.

7. There is a definite negative pressure in the epidural space, the cause of which has not yet been explained.

8. There is a definite selectivity of the sensory nerves over the motor nerves when novocaine is used in this type of anesthesia.

#### BIBLIOGRAPHY

1. Pagés, Fidel: Metameric anesthesia, *Rev. de San. Mil.*, 11:351-385, 1921.
2. Dogliotti, A. M.: Segmental peridural spinal anesthesia, *Am. Jour. Surg.*, 20:107-118, 1933.
3. Guttierrez, Albert: Metameric peridural anesthesia, *Buenos Aires Surg. Review*, 11:665-685, 1932.
4. Guttierrez, Albert: Results obtained with peridural anesthesia, *Buenos Aires Surg. Review*, 12:93-101, 1933.
5. Ruiz, Vincent: Pagés peridural anesthesia and gynecology with a report of 1,431 cases, *Latin Am. Med. Review*, 20:233, 1935.
6. Harger, John: Peridural anesthesia in abdominal surgery, *Ill. Med. Jour.*, 65:317-319, 1934.
7. Hess, Elmer: Epidural anesthesia in urology, *Jour. of Urology*, 31:621-628, 1934.
8. Soresi, A. L.: Preliminary report on epidural anesthesia, *Med. Jour. & Record*, 135:165-166, 1932.

#### DISCUSSION

Dr. P. Graffagnino: I want to express my sincere appreciation to Dr. Odom for having allowed me the privilege of reading his paper and to assure you that it is as excellent as the presentation he has made tonight. He has covered the subject in such a thorough and masterly manner that I am going to ask him to let me emphasize some of the points he brought out.

First was the simplicity of the method. I was astonished to find how easy it was to give this type of anesthetic. In other words, one can hardly keep out of the epidural space, because as Dr. Odom brought out in his slides, this space takes up practically one-half of the intervertebral column. There are three methods of getting into the epidural space. First, the method described by Dr. Odom and used by Guttierrez and his co-workers. Second, the method described by Dogliotti wherein you attach the syringe to the needle, you make constant pressure on the plunger. As the needle passes through the spinal ligaments and reaches the epidural space, the hand holding the syringe will suddenly note a diminution in the resistance allowing the almost instant free injection of fluid into the space. Third, the method wherein you go direct into the subarachnoid space as evidenced by the free flow of cerebrospinal fluid from the needle, then gradually to withdraw the needle until the spinal flow ceases, and then to aspirate until no fluid can be obtained. This fact assures you that you are in the epidural space.



The second point was the extent of anesthesia. It is astonishing the extent to which the anesthesia will spread. From the tip of the toes up to the inferior maxillary region you get complete anesthesia. The patients are able to move their limbs when requested to do so, and yet there is complete anesthesia as far as the sense of pain is concerned.

Another very impressive point is the lack of respiratory or cardiac symptoms or marked fall in blood pressure so common in spinal anesthesia. The reason is that the fluid is deposited outside the cerebrospinal canal, and therefore, with proper technic, there is no possible chance of the anesthetic solution affecting the central nervous system.

It is wise to call attention to the fact that this method is not to be compared to spinal anesthesia because it is an entirely different type of anesthesia. It is more in the form of an extensive regional block type of anesthesia, such as would be had in sacral anesthesia.

It is well to remember that in order to obtain anesthesia it is necessary to use from 500 to 1000 mg. of novocaine in solution and this amount of novocaine if introduced into the subarachnoid space or into blood vessels may have disastrous results. It has been proved that solutions of novocaine prepared and allowed to stand for more than 24 hours are not safe to use and for this reason, we endeavor to use novocaine crystals whenever possible or make a fresh solution for every injection.

As soon as we are able to standardize the technic and find a satisfactory strength that will give us complete anesthesia somewhat comparable to spinal this method should supersede spinal anesthesia.

Dr. Mims Gage: I have enjoyed Dr. Odom's paper just as much as I enjoyed watching him induce epidural anesthesia in patients from our service.

We all owe thanks to Dr. Odom for bringing to us his experience in epidural anesthesia, which has been very extensive. We have used this form of anesthesia in several abdominal cases in our service (all given by Dr. Odom) and as for the anesthetic value and postoperative recovery it was ideal.

The use of 50 cc. of 2 per cent solution of novocain (1 gram of novocain) seems to be a rather large amount. However, I feel sure that the use of a weaker solution would not suffice. If one uses a weaker solution one must use a very large quantity or wait for one-half to three-quarters of an hour for the anesthetic effect to manifest itself.

We have used sacral anesthesia for operations upon the perineum since 1923 and have had very good results. In a few cases in which we introduced 90 cc. of  $\frac{1}{2}$  per cent novocain solution into

the epidural space through the sacral hiatus, the appendix has been successfully removed under the anesthesia produced. As the epidural recommended by Dr. Odom is a type similar to sacral anesthesia, but can be applied to a wider degree in abdominal and even chest surgery, I believe that the procedure will find considerable favor among surgeons.

The procedure is certainly not without danger, used as a routine anesthetic, but used with caution as recommended by Dr. Odom, unfavorable reactions will be minimized.

I believe that some of the reactions reported by Dr. Odom may well be explained as due to the effect of adrenalin. Some of the reactions following local as well as spinal anesthesia have been due to the hypersensitiveness of the patients to adrenalin, as all the symptoms pointed to adrenalism.

I again congratulate Dr. Odom on the excellency of his paper and the results obtained in the use of epidural anesthesia at Charity Hospital.

Dr. H. V. Sims: I have not a great deal to add to what Dr. Odom has said. He has covered the subject in such a complete way there is hardly anything to add in so far as epidural anesthesia is concerned—I prefer the term Dogliotti used, that is, "peridural anesthesia."

For about nine years now I have used sacral epidural anesthesia on my service in all pelvic operations where it was not necessary to open the abdomen. I have discarded the use of adrenalin in my solution for the past five or six years. I have used sacral epidural anesthesia in at least 500 cases—when I reported the cases in San Antonio last year I had over 300.

One of my reasons for my speaking tonight is to assure you of the safety of the solution. I have used in sacral analgesia, an average of 80 c.c. of 1 per cent procain and very often used 100 c.c. because, as Dr. Odom said, there are variations in the capacities of the epidural space. In none of the cases was there any serious complication. The most interesting feature of it to me has been the fact that the patients are entirely comfortable afterwards. There is no nausea nor vomiting. In none of the cases has it been necessary to do gastric lavage nor are there any of the disturbing complications we have with a general anesthetic. On my service there has been but one general anesthetic used since 1929.

Until we can finally convince ourselves of the perfect analgesia and safety in peridural, I still will have faith in sacral analgesia; it is apparently safe. In one day I used sacral in four cases. The internes on the service give sacral with the utmost ease. I used it the other day on a girl fifteen years old and on a woman sixty years old, both with complete lacerations of the perineum; that surely is a good test of the analgesia. How-

ever, I am willing to be convinced and Dr. Odom has on several occasions shown me the possibilities of epidural analgesia. The occasion might arise that upon sacral injection after bimanual examination we might find pelvic pathology and the necessity of opening the abdomen which cannot be done under sacral; we can only do vaginal work.

Dr. E. L. King: Let us not forget in our enthusiasm over this method the fact that general anesthesia has still a field. I speak very feelingly on this subject as I went through an experience myself recently. Three grains of nembutal followed half an hour later by morphine and atropine make you entirely forget the world is turning around. You may notice a little whiff of the general anesthetic. I just barely remember one breath of ethylene. I woke up at 5 o'clock in the afternoon, no gastric lavage, and nothing else. The main trouble I had during convalescence was a crick in my neck. There was nothing so far as the operation was concerned, nothing so far as the anesthetic was concerned.

Dr. Odom (in conclusion): I appreciate the interest and attention that everyone has shown to-night, and the remarks of those who discussed my paper. I do not wish to present this type of anesthesia as the ideal anesthetic. It has dangers associated with it, and requires a certain amount of experience in its administration. However, I do feel that it is as safe and perhaps safer than any anesthetic now in use. I think it is going to prove particularly useful in upper abdominal and chest surgery. Certainly, at least epidural anesthesia is deserving of more interest from the medical profession of this country than it has yet received.

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## THE USES OF HYPNOSIS IN PSYCHOTHERAPY\*

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In using hypnosis for psychotherapy, I have found that we encounter, and have to overcome, obstacles which are not common to most forms of treatment. The average individual, professional as well as lay, has usually acquired his information in regard to the procedure from the dramatic effects that he has seen upon the vaudeville stage, in the moving pictures, or read of in fiction, and has an entirely distorted attitude because of the misinformation, or part information, thus received. Apparently the mis-

understanding produced by charlatanism has engendered a prejudice which has, to a considerable extent, limited the therapeutic use of hypnotism in this country.

The initial attitude of a large proportion of people varies from open ridicule and scoffing to an almost superstitious fear, and nearly every one feels that a susceptibility to hypnotic influence is an indication of intellectual inferiority, a weakened will, or whatnot, and that in submitting to it he is placing himself completely in the power of the operator. It can be readily seen that unless these erroneous ideas are corrected as a preliminary step and the patient given a proper understanding of the state, that much of the therapeutic value is nullified. He hesitates to acknowledge to himself that he is possessed of a low-grade intellect or a weak will, nor does he place himself completely under the authority and control of someone else without some trepidation, no matter how much confidence and respect he may have for that individual. Usually he also wants reassurance on what will happen to him in the event of the operator's sudden demise while he is still asleep, and that he will not be required to divulge all of his secrets, and so on.

Hypnosis is not a new procedure in medicine; it has been in use for over a hundred years, knowingly and understandingly. I say knowingly and understandingly as, of course, the effects must have been used without understanding since time immemorial for one purpose or another. It is a matter of record that Esdaile, an English surgeon in India, used it to produce anesthesia for minor and major surgical operations from 1830 to 1851, and it has been used therapeutically to a varying degree ever since.

I will not attempt to explain the hypnotic state; as a matter of fact, I know of no established explanation, although it has been explained in many ways. It is the most powerful type of suggestion, and everyone reacts to suggestion many times a day. Statistics show that from 90 to 95 per cent of people are hypnotisable, although in a varying degree, and that the strong willed react more readily than the weak willed because of their greater power of concentration. Those not susceptible are people who for one reason or another cannot, or

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will not, fix their attention, as imbeciles, the insane, some types of neuroses, any one who cannot concentrate.

In the practical use of the procedure, stumbling blocks other than the ability of a given patient to go into the hypnotic state are encountered, but this is the first barrier to be passed. As a preliminary step, the patient should understand something of the state, and any misgivings that he may have, removed, so that he will be entirely willing to cooperate. He should know that he is not acknowledging an intellectual defect in reacting to the suggestion, that he is not displaying any weakness of will, nor will there be any deterioration of his will power as a result, but on the contrary the effort is to build up. He is given to understand that in order to produce results the somnambulistic state, to which only 8 per cent of people are susceptible according to Bramwell, is not necessary, and that for therapeutic purposes the lighter stages are used anyway, so that he will at all times be cognizant of what is going on; that he will hear and understand what is said, and remember it, unless he is specifically instructed not to. He is assured that he cannot be compelled to commit acts which are contrary to his moral training, such as stealing, murder, sexual indiscretions and so on; that if such a request is made that he will either awaken spontaneously or refuse, and that his secrets are likewise safe.

As may be supposed, a certain number of people for one reason or another cannot go into the state, although they are perfectly normal and should react. This may be due sometimes to an individual's attitude towards the operator. I think the commonest reason that I have met, is an over anxiety to accomplish it, and next, is the individual who although consciously perfectly willing is subconsciously unwilling or has a fixed idea that he cannot submit.

With the patient safely asleep, one's troubles are not always ended. I have found in the actual treatment of patients that the auto-suggestion as demonstrated by Young and Foote can, and does, often interfere with the action of the suggestion. The neurosis case frequently goes under with certain mental reservations, conscious or unconscious, as to what he will or will not do, possibly rendering him open to sugges-

tion along all lines, except that of some specific symptom which he does not wish to surrender, most often the one you are anxious to remove, and at times it is very difficult if not impossible to overcome this resistance. Again, some suggestion you yourself have unwittingly offered in your preparation, may interfere. In assuring the patient that he will remember what goes on, I have neglected to mention that he will have an amnesia should I suggest it and later be unable to induce the amnesia. Occasionally, some episode or reaction of the past is recalled and prevents his accepting the suggestion. I have a patient now whom I am treating for a habit spasm of her eyes; they will close involuntarily at any and most inopportune times. I had no difficulty in inducing the hypnotic state, and controlled the spasm very well, but found that, as sometimes happens where suggestion of any sort is used, it recurred. Thinking to impress her, I suggested an anesthesia of the hand to be effective for a short time after she awakened. She was well under, but to my surprise her hand was not anesthetic. A second and third attempt failed, and then the patient volunteered that someone had hypnotised her a number of years ago and never could produce anesthesia. She probably had not been under hypnosis this first time, but the failure to produce a result left its impression, and has caused her to feel that she will not react to this particular suggestion.

These and many other obstacles are encountered as you go along in treatment of cases. A complete understanding of the condition as a whole is most essential, as it is in any other form of psychotherapy. In neuroses rarely does any one symptom stand alone, but many psychic bypaths lead to it, or ramify from it, and the main issue can be successfully dealt with only through a knowledge of these side issues. One struggles to re-establish the habit of sleeping in an insomniac and finally after several good nights heaves a sigh of success, to find the next night that one of the many conditions which the patient has conceived during the course of his insomnia to be a cause for sleeplessness, has occurred, and one starts all over. In making your suggestion, the wording should be absolutely specific as to the effect desired, but should be made with due regard to



all the mental reactions which have contributed to, or developed out of, the condition, capitalizing here, combatting there, with the same understanding of psychic reactions used in any case. The intelligent man, for instance, wants to understand how he can be relieved of a certain symptom which has troubled him for a long time with no more apparent effort, and is apt to resist the suggestion or reproduce the symptom later unless he knows that he may surrender it consistently without sacrificing his dignity or self respect. Recurrence of the symptoms should be guarded against as carefully as with any form of suggestive treatment; the patient does not benefit much if he is cured only to break down again at the next doctor's office. Sometime ago a young man came to me because of various fears and hysteroid attacks which came so frequently as to handicap him in the performance of his duties. The attacks were controlled without difficulty, but recurred under the first stress encountered by the patient. Finally, after considerable effort, the causative factor was discovered and adjusted, and there have been no more recurrences in a period of a number of months. A young lady with similar attacks assisted in the control of herself repeatedly over a period of two years, continues to break down upon the slightest provocation. She has refused to cooperate in finding a cause.

During the past several years, in selecting the cases upon which I have used hypnosis, I have been rather indiscriminate, both as to the condition and as to the type of individual, taking the attitude of the patient as about my only gauge, so that, without having a large series of cases in any one particular condition, I have used it in all sorts of things and on all sorts of people. I have found it helpful in general and at times have obtained startling results in an individual case. Naturally, it is most useful in functional conditions or conditions where a large functional element exists. I have tried it with most success on hysterical paralyses, pains, convulsions and so on; functional impotence in men, hypersexual reactions in women, insomnia, drug addictions, cigarette addictions, habit spasms and tics, nocturnal emissions and other bad dreams, nocturia, vaginismus, all types of

neuroses, in short, all sorts of functional conditions and some which are not. In one case of thrombo-angitis-obliterans, I was able by repeating the treatment whenever the effect wore off, to keep the patient moderately comfortable over some time, much more so than was possible with drugs. I even have a young doctor who assured me that he went through an entire season free of hayfever following treatment and the next season without treatment he had a rather miserable time. Another hayfever victim, a young woman, went through a season without an attack, but I have lost track of her since. Naturally, I can not say that hypnosis was actually responsible for these results, and certainly I am not adding it to the list of hayfever cures, the relief may have been coincidental to other things, probably was, but it is possible to influence vasomotor control and stop pain with hypnosis, and certainly mental morale can be built up.

In conclusion, I would not give the impression that I am unduly enthusiastic over hypnotism and would recommend it indiscriminately, or that my results have been uniformly successful. On the contrary, I would like to point out that often too much is expected of it. It is not magic and is not applicable to all pathological conditions, nor to all people, but should be used with the same judgment as to selection of cases and the same skill in its application as is employed with any other method of treatment, and, as with any other method, some failures are to be expected along with the successes. I do believe it most helpful and useful, and if one realizes that it is not magic, selects cases with a moderate amount of common sense, and treats them with at least a modicum of the principles of psychotherapy without expecting miracles, many cases which otherwise would either go unimproved or improve after long, arduous and expensive efforts can be cured or helped.

#### BIBLIOGRAPHY

- Hart, H. H.: Hypnosis in psychiatric clinics, *Jour. Nerv. and Ment. Dis.*, 74:598, 1931.
- Vincer, N.: Amnesia: dual personality: with special reference to a case recalled by hypnosis, *Canad. Med. Assn. Jour.*, 25:147, 1931.
- Banister, H.: *Psychology and Health*, MacMillan, 1935.
- Hollander, B.: *Methods and Uses of Hypnosis and Self Hypnosis*, MacMillan, 1928.

## DISCUSSION

Dr. L. L. Cazenavette (New Orleans): I listened attentively to the paper of Dr. Connely. My impression is that he has either been hypnotized or has hypnotized himself. The result of this hypnosis is the revival of a subject that has remained in a fairly dormant state for many years, especially in our immediate surroundings.

The public exploitation of hypnotic experiments has deterred, for fear of ridicule, many medical men from using hypnosis therapeutically. It has also instilled in the prospective patient a certain fear to submit to such a measure, not knowing what the consequences will be.

Bernheim defines hypnosis as the induction of a peculiar psychical condition which increases the susceptibility to suggestion. Since that definition was given it has been found that by hypnotism we are able to discover hidden memories and to influence the subsequent conduct of the patients. Thus the sources of emotional conflict and other casual factors may be discovered and restored to the waking state through the use of past hypnotic suggestions. Hypnosis is a means of bringing to light a great deal of material with which a patient has been preoccupied but which he or she has been unable to tell anyone about under other circumstances. There are many things in our past life we will not discuss openly, but under the influence of the hypnotic state the patient has no hesitancy in bringing these conditions forward and this is the way hypnosis is of great help.

The attempt is to unearth all unconscious traumatic experiences and readjust the patient's attitude towards them by making them conscious.

The influence of psychogenic factors in certain types of epilepsy has been admitted by many medical men and hypnosis may have a place in the treatment of these patients.

The actual usefulness of hypnosis is limited to the treatment of highly suggestible states and probably should be reserved for the treatment of the psychoneuroses that fail to respond to other therapeutic measures.

I do not see how hypnosis can be of use in the advanced forms of psychoses where it is impossible to have the cooperation of the patient.

I agree with Dr. Connely that one of the stumbling blocks in the application of such therapy is the difficulty with which the patient will accept such treatment. By properly explaining to him that there will be no harm done, that there will be nothing detrimental to the patient, and by seeking his full cooperation, hypnosis will be of use in clarifying many cases of psychoneurotic states.

Dr. R. McG. Carruth (New Roads): This subject has been of much interest to me for the past

fifty years, so it is useless to tell you how very much I enjoyed Dr. Connely's paper.

A great many years ago when Carpenter's lectures on "Mesmerism, Spiritualism, Table-tipping and Odalism" fell into my hands, I became very much more keenly interested in the subject.

About 1906, Monroe, a writer and lecturer on hypnotism, came to our little town on his tour. We got up a class among the doctors, and Monroe made us promise that we would never hypnotise any one except for treatment or for instruction. I afterwards practiced it in all kinds of cases, surgical, neurotic and psychotic, sometimes to deep hypnosis, at others, to only strong suggestion. I have taken out tonsils, by the old way, tonsilectomy, without trouble and without assistance; a fibrolipoma of the cheek in a six foot, one hundred and eighty pound, young negro man, leaving him sleeping on my surgical table while I sent out for some young confreres who were a little skeptical, to witness the snoring negro. I have treated successfully the case of a kleptomaniac, and also an intelligent young lady who was a confirmed neurotic giggler. My most spectacular case was that of a rather brilliant young married woman who had previously been confined in a sanatorium for mental breakdown. She was by religion a confirmed spiritualist; was a member of a spiritualist church. She fell entirely by accident into my hands while I was treating her sick child. This lady, Mrs. S., told me she was sick, could not sleep, was annoyed each night by spirits of the dead, her departed enemies, who were continually knocking at her doors. She refused to read my Hudson's "Law of Psychic Phenomena" for fear it would disturb her religion!

I saw my chance for more extended experimentation, so I organized a class of middle-aged men and women, including one other "spiritualist," and we held weekly meetings in my home for a period of some months. This class, some of them skeptical, made tables rap and tip and turn over and roll all over the floor. To shorten this story, I finally told Mrs. S. that I myself kept a ghost in my closet and would some night call him out. This excited her curiosity so I hypnotized her very quickly and in a very few minutes I called up a departed friend, introduced him to her, made her take his cool, clammy hand, then I carried on a conversation with him for her benefit. I then, after lecturing her, placed her under a wholesome posthypnotic suggestion and quickly awakened her. I then explained it all to her which was corroborated by others present, when she was greatly astounded. She afterwards read Hudson's book and after some months told me "I dont know what I am but I am no longer a spiritualist." This was years ago, and so far as

I know, she has never relapsed, has had very much better health in every way.

This science should be taught in the medical schools, and the time will come, as Thompson Jay Hudson so strongly urges, when laws will be enacted forbidding others than doctors from practicing such an art.

Dr. Hans Schroeder (New Orleans): Some 20 years ago when I was an academic student majoring in psychology, a Chinese, aged 24 years, came to see me. He was stuttering badly. A surgeon had operated on his tongue already, but without benefit. Speech training by me proved not promising. I then analysed his dreams and was struck by the frequent recurrence of dogs trying to attack him in these dreams. Further investigation brought out the nucleus to be as follows: When he was a boy 4 years old, he was in China riding in the back of a wagon from town to his village, when a huge dog tried to attack him and frightened him very much. Then his stuttering began and gradually increased. After eliciting this information I used hypnosis and suggested courage and allayed fear of dogs. In three months his stuttering had stopped completely.

The point I want to make is that when you give suggestions in the hypnotic state they have to be directed against the original psychic trauma and not against any of the later impressions.

The most instructive books on hypnotism, in my experience, are those by Bramwell, Bernheim, and Liébault, but those of Moll and Wetterstrand are unique in that they also report the failures; the latter used chloroform as an adjunct. Hypnotism has a definite place in medicine, but fell into disrepute through Charcot who used abrupt means for getting the subjects out of the hypnotic state, thereby producing psychic traumata which were sometimes worse than the original.

In hysteria, where it would be most valuable, hypnotism has failed. This introduced the psychoanalysis of Freud, which is history now.

Dr. C. S. Holbrook (New Orleans): Psychotherapy in its various forms is used by all of us in practice, and the results that we, as physicians, obtain are in large measure dependent upon factors which are purely psychic, as apprehension and fear being displaced by a feeling of competence and expectancy for recovery. Very elaborate techniques of psychotherapy have been developed, the most intricate and time-consuming of which is psychoanalysis, treatment often extends over a period of twelve months. The operator must be willing to limit his practice to a very few patients and to devote himself exclusively to this type of treatment, becoming proficient in it only after a period of several years' training.

Hypnotism is of considerable value in certain forms of functional nervous disorders or neuroses,

and especially is it applicable in hysteria. When results follow its use, they are generally immediately forthcoming, thus saving a great deal of time on the part of the patient and the physician. Hypnotism is not to be used in psychoses or serious mental disorders.

I think Dr. Connelly gave a very splendid paper, and its claims for hypnotism are quite modest. There are some instances in which hypnotism seems to make the patient more difficult to treat by other means when hypnotism fails; the patients do not respond as readily to other types of treatment as they would have if hypnotism had not been used.

We all know the extensive use of hypnotism thirty or forty years ago. It went largely out of use, probably because it was so greatly abused, until the World War, when certain hospitals employed it rather extensively in the treatment of so-called "shell-shock" cases. At the present time its use is restricted, though there do seem to be certain cases in which such treatment is indicated. I personally do not use hypnotism; therefore, I am rather adverse in my criticism, but I do not mean to be so about Dr. Connelly's presentation. Certainly in hysteria one often gets striking results by any method of treatment provided the suggestion is strong enough and the operator understands the mechanism of the disorder.

I wish to commend Dr. Connelly for being modest and cautious in his claims for the use of hypnotism and not urging it except where the indications are clear-cut.

Dr. Walter J. Otis (New Orleans): As has been told to you, the question of hypnosis is not new. One of the main reasons why such odium has been cast upon this necessary adjunct in medicine is its use and manipulation by charlatans and quacks. For the similar reason, massage has been frowned upon in many divisions of medicine because of the mal-usages of this subdivision of therapy in the hands of the untrained; hence, it has been accepted and taken up by certain groups of bone manipulators.

Hypnosis has been used for many years in England and France. Braid-Esdaille, Ozam of Bordeaux, Charcot-Riché and Broca were all enthusiasts and instrumental in applying this therapy to their patients, with marked and beneficial results. The Nancy School was likewise successful. The best demonstration of hypnosis was found during the World War, when this therapy was performed in the French and American Hospitals. In our hospitals behind the lines, and especially in Base No. 117 (the sole hospital for war neuroses), this mode of therapy was extensively carried on, Dr. Connelly being one of the first staff members assigned to this group. There, psychoneurotic groups that were admitted were treated



and were able to return to their respective centers and duties within 52 hours.

To direct properly and dispense hypnosis, it is necessary that the individual be properly equipped; he must have the confidence of the patient, and it has been found that there are stubborn cases which respond to this form of psychotherapy that do not respond to other types of treatment.

I am very happy to find the restoration of this form of treatment replaced in our armamentarium.

Dr. J. D. Young (Shreveport): Hypnosis or hypnotism, as mentioned before, is an old remedy. Mesmer first mesmerized, which was purely a form of hypnosis. Hypnosis is suggestion therapy or suggestive therapy. Before hypnosis is produced, the psychotherapist should be careful in choosing his subject as there are different types of reaction to every type of therapy. Some patients are benefitted; some are made worse. You must evaluate the constitutional make-up of the individual before hypnosis is produced. In producing hypnosis you must have the cooperation of the patient. The patient must remove all inhibiting psychological influences and must be made to understand that in submitting himself to hypnosis he is not admitting, as most think, an inferior mental make-up. I think fear of inferiority prevents quite a number of patients from going under hypnosis in the proper way. After hypnosis has been produced, the benefits are many, but mainly we are able to bring back to the patient's mind repressed, forgotten complexes that produce these psychoneuroses.

I want to congratulate Dr. Connely on his paper, and I think properly understood hypnosis should be brought back and used for the benefit of both the medical profession and the patient.

Dr. Edmund Connely (In conclusion): I would like to thank the discussors for their kindness. I find that they mostly agreed perfectly with me. There is no question but that hypnosis is nothing in the world but a powerful form of suggestion, there is no question but that every doctor uses suggestion in every phase of medicine. Without suggestion no one would have any reputation as a doctor.

I am glad Dr. Carruth brought out the fact that no special quality is required to induce hypnosis; almost anybody can do it. I think the success or failure of your treatment depends not on your ability to produce hypnosis, but upon the ability to understand your case and to use properly your treatment. That is what I would like to emphasize.

I have not used it in producing anesthesia, except in the extraction of teeth and things of that sort, merely as an experiment. Occasionally I have used it to abolish pain. Recently, I had a

case of vaginismus in a young married woman. In cases of that sort it is extremely useful.

As Dr. Cazenavette said, I do not think it is applicable to the insane, for the insane man cannot fix his attention and you cannot get him under, besides his condition goes more deeply than that of the neurotic.

I do not agree with Dr. Holbrook that the patient is more intractable to other treatment in event of failure, if the hypnosis is properly used. Any sort of psychotherapy can make the patient worse if used without the proper understanding of the patient and his condition. In any form of psychotherapy you might fail if you do not measure your patient properly, but I think it is a very unwise psychotherapist who does not leave himself some loophole in the event of a change of Toulier becoming necessary.

So far as time is concerned, I don't know of any type of psychotherapy that does not take time if it is used properly. It of necessity requires time, and I find with hypnosis that frequently you can save a great deal of time. You may do in a few weeks what might take months to do otherwise.

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## ROENTGENOGRAPHIC STUDY OF THE SPHENOID SINUS\*

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and

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NEW ORLEANS

Of all the nasal accessory sinuses, consideration of the sphenoids is probably most difficult for both the rhinologist and the roentgenologist and yet it is in this very field that the most serious and important decisions must be made and it is here that all possible information that we can furnish is most appreciated by the specialist.

The anatomical relations of this sinus have only to be recalled in order that we may realize its importance. We have here as adjacent structures of the greatest importance, the optic nerve, the brain, pituitary gland, the cavernous sinus, the third, fourth, fifth and sixth nerves, to mention only a part of the essential neighboring anatomy. It is most evident what dangers may follow when the exact operative field is exceeded.

The sphenoids are not satisfactorily demon-

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strated roentgenographically until some time after the first few years of life and this is in large part probably due to the difficulties of technic. Quite rarely they do not develop at all and such a condition as this must, of course, be very carefully differentiated from extensive disease in which the sinus is entirely filled with pathological material.

The sphenoid sinuses vary greatly in size and shape and are found in the body of the sphenoid bone. There are usually two separate cavities separated by a distinct septum but it is the rule for an unequal rather than an equal division. The disproportion may be so extreme that there may seem to be but one large cavity and only after the most careful study is the presence of the two sinuses recognized. The dividing septum may be straight or curved or even very markedly irregular so as to give the impression of even more than two cavities and it may be inclined to one side or the other and as this inclination becomes more pronounced, the less distinct do we find evidence of a separating line as compared to a truly vertical septum.

In cases where we have disproportionate development of the two sinuses there may be a corresponding overdevelopment of the ethmoid on the restricted side to such an extent that we may have a very large ethmoid cell lying close to the small sphenoid and giving the impression of a double sphenoid. A double sphenoid is rare, however, and is usually found in a large cavity. Such conditions must, however, be recognized in order that an incomplete operation may be avoided. Another point to remember is comparatively frequent extension of the sinus into either the anterior or posterior clinoid processes or both. Further, considering the anatomy of the sphenoid, we must remember that the surgeon will appreciate exact information as to the depth in the anteroposterior and vertical diameters as well as laterally. The apparent thickness of the walls is most essential and this is largely related to the size; the larger the sinus as a rule the thinner its walls.

Leaving this rather hasty summary of the main anatomical points upon which information is essential for the rhinologist, we come

now to the question as to how this information is to be obtained roentgenologically. Quite early in the history of roentgenology satisfactory studies of the anterior sinuses were made, beginning with the work of Dr. Caldwell who reported in 1906 the use of an angle of  $25^{\circ}$  as satisfactorily demonstrating the anterior sinuses of the frontal and maxillary. This angle was later changed to  $23^{\circ}$  and it is to be recalled that the angle here mentioned means that the ray is to enter the head posteriorly at such an angle from a line drawn from the glabella to the external auditory meatus.

For many years this remained the one principal method of sinus roentgenography with certain minor modifications as for instance the addition of the Waters position which was used to throw the petrous bones out of the region of the maxillaries. Somewhat less than fifteen years ago the first real advance in the identification and satisfactory diagnosis of the posterior sinuses was made by our local authority, Dr. Amedee Granger. His work is, of course, familiar to all of us and the simplicity of his methods and the positive identification of all the groups of the sinuses has made it readily possible for all of us to feel able to give positive information regarding the existence of pathology in any of the nasal accessory sinuses.

About the same time that Dr. Granger's work was announced there was published in France an additional means of study of the sphenoid sinus by Dr. Hirtz. This method variously known by the name of the author, the chin-vertex, the vertex mental or the mento-vertex position, is extremely valuable in supplementing the information given by the  $107^{\circ}$  position of Dr. Granger. It is this position and its value in enlarging our knowledge of the anatomy of the sinus which it is desired to emphasize today.

The  $107^{\circ}$  postero-anterior position gives us undoubtedly by changes in the areas of projection of the sphenoid, gradations of density and character of the upper limit of the sphenoidal area, whether clear cut, fuzzy or absent, important information as to the presence or absence of pathological changes in the sinuses. It cannot, however, give us the lateral extent

of the sinus nor can it supply information so satisfactory in regard to the dividing septum, the extent of the divisions of the sinus or the presence of partial septa resulting from well developed ridges along the floor of the sinus as is obtained in the Hirtz position. It is realized that the outline of the sphenoid is considerably distorted in this view but this is more marked in the antero-posterior diameter than in the lateral and this distortion is not sufficient to detract from the value of the position in adding to our knowledge of the topographical anatomy of the sphenoid.

There has been considerable hesitation in the use of this position owing to the supposed difficulties in obtaining satisfactory films, but with a little care these can be overcome in 80 to 90 per cent of the cases. Whether the view from chin to vertex or vertex to chin is used depends very largely on the preference of the individual operator. Our preference is for the chin-vertex, the ray being directed through the chin to the top of the head with the film beneath the vertex. This can be obtained in either of two ways, shoulders supported by a pillow and head bent backwards or by bringing the shoulders to the edge of the table and allowing the head to hang over the edge, the vertex resting on the cassette supported on a low table. The essential thing is to throw the image of the lower jaw as far away from the sphenoids as possible. Either a plain film or a stereoscopic pair can be made. This view requires a little more exposure than either the 23° or 107° film and this can be compensated for by an increase in either voltage or time, preferably by voltage, as it is not a comfortable position at best and the exposure necessary should be obtained as quickly as possible. The Bucky diaphragm is by no means essential and is in our opinion preferably not used in any sinus films. A true lateral film plain or stereoscopically will complete the detailed study of the sphenoid.

In conclusion, we wish to emphasize again that it is our belief that in all cases where there is any question of operative measures on the sphenoid, the rhinologist should be furnished the most complete information available as to the pathology and topographical anatomy of this sinus as shown in the chin-vertex and

lateral views as supplements to the usual postero-anterior views.

#### DISCUSSION

Dr. Francis E. LeJeune (New Orleans): We all know the diagnosis of sphenoiditis may be accomplished by several methods. However, Dr. Bowie has presented a method which is not only diagnostic in character, but gives a vast amount of additional important information not conveyed by other methods.

To the surgeon whose task it is to open the sphenoidal cavity, the additional information as to the depth and size of these cavities, situated in the middle of the head, is of paramount importance. The chin-vertex position will show an occasional sphenoidal cavity extending well beyond the median line. In other words, it is possible to have a very large sphenoid sinus on one side and a very small one on the opposite side.

The knowledge of the existence of such a condition preoperatively is of vast importance to the surgeon, as you can well realize, and the chin-vertex position, in my experience, is the only method that will give this type of information.

I have made it an invariable rule, the past four years, to always request a Granger position, which I think is most excellent and reliable, as well as a chin-vertex position, using each to check the other. The information gained from the chin-vertex position has been invaluable to me in the operating room.

Dr. S. C. Barrow (Shreveport): I do not know, gentlemen, that there is anything in my roentgen diagnostic work that I am less satisfied with, ordinarily speaking, than I am in my sinus work. I have tried the various positions, and to make my discussion short I would say it is about the same as Dr. LeJeune has just said.

I have never been satisfied to rely absolutely upon the line known as the Granger line, though I have hesitated to place my opinion against one who has had such wide experience. I feel that I have gotten more information from the position just described by Dr. Bowie, though I reverse it, and it is the superior-inferior posture, with me, while with him it is the inferior-superior. Of course there is practically no difference, as the sphenoid is about centrally located from the top and from the bottom. I therefore always check, when I am in doubt, the two positions, one with the other, as well as the lateral position.

I was glad to hear Dr. Bowie's paper and Dr. LeJeune's discussion, which make me feel that I am following the proper course.

Dr. A. I. Weil (New Orleans): There is no sinus more important, and probably none as important, in causing serious complications, as the sphenoid, and I think we are all agreed that there is no sinus in which it is as difficult to obtain information roentgenologically.



We know that the Granger position gives us information as to certain conditions in the sinus. I do not know whether the blurring in the Granger line has as distinct and undeniable significance as is thought by Granger and others, but I do know there is a good deal of information to be obtained by that method. But I cannot see any reason, in a sinus, the symptoms of which are so obscure, that we should not avail ourselves of every possible method, and there is no question that in a few cases the additional information obtained from the vertex position will give us something on whether we are going to obtain anything or not.

The most serious conditions in sphenoids that we have to contend with are those cases of sudden blindness. Even though clinically and radiologically we find no manifest evidence pointing to the sphenoid, where we are faced with the condition of sudden blindness and where we feel that the sphenoid may be responsible, I think we all have more or less accepted the decision that sphenoid must be opened. Nevertheless, we feel a good deal more comfort in opening such a sphenoid if we have gained what information we can as to the shape and size of that sinus, by the chin-vertex position as well as by the Granger position.

Personally I have obtained much added information also by the use of lipiodol injections into the sphenoid. Some years ago, ten years or anyway seven or eight years, I made a series of lipiodol injections in normal and pathological sphenoids, and I want to say that the use of the Granger and the chin-vertex in injected sphenoids often gave us an entirely different opinion as to the pathologic condition or normal condition of the sphenoid. So I say in a disease as obscure and as serious as that, let us use the chin-vertex and the Granger, and by all means let us not forget that the injection is often a very great help to us in these cases.

Dr. William A. Wagner (New Orleans): I believe in sphenoid radiography, the Granger position, at a 107° angle, is the best diagnostic position we have. I must agree with Dr. Granger. I like it the best. As a diagnostic procedure, it is by far the best, in my experience. I think some men might disagree with me, but in addition to just looking for clues on a radiogram, we have to sometimes use that radiogram in conjunction with radiopaque substances. Lipiodol, in the Granger position, is of little value, except in the cases that might be hypoplastic. Occasionally it might be of a little value in some cysts or polyps, but it is the Hirtz position that I think is of most value. I think with the Hirtz position, when we use any opaque substance, we have a better op-

portunity of seeing a cyst or a polyp or possibly some other type of pathologic process in that sphenoid. As far as opening the sphenoid is concerned, I do not think anybody who is really conscientious is going to attempt to open the sphenoid whose ostium cannot be found prior to the operation, without using more than a Granger position. I say that because I routinely use the Granger position, but I request also the Hirtz position whenever I am suspicious of any sphenoid infection.

I have had occasion to have to hammer my way into a sphenoid with a heavy spinal needle, and I would not hesitate to hammer a needle into a sphenoid if I had properly studied the patient, but I would not dare open it by hammering a needle in with just the Granger position. I would not. I never have. I usually use the lateral position to locate the position of the needle, by bisecting the middle turbinate, and if the needle is in proper position I supplement that picture by the Hirtz position, even though I may have had a previous Hirtz position. The value of the Hirtz position is that it shows whether you are dealing with one or two sphenoids, and the type of sphenoids you are dealing with. Occasionally I have had the good fortune of having used the Rhese position. It shows the optic foramen in the center of the orbit, and the position of the sphenoid adjacent to it in addition to the size of the optic foramen. (Blackboard drawing) I had one patient who had had a retrobulbar neuritis, whose photograph is in the exhibit, who had had a cystic degeneration, with metaplasia of the mucosa, and in this instance there was a cyst that could hardly be recognized. I did not notice it until I made the Rhese position, and then I could imagine I could see it in the Hirtz position, and it was absolutely impossible to see it in the Granger position.

I have gone so far as to request not only the Granger position, but the Hirtz, the Scheier or lateral, and also the Rhese positions. You see it is really a problem, when you have to pound your way with a needle and a mallet into a sphenoid. I have had that occur several times, where I could not find the ostium, and I had sufficient evidence on the clinical examination in addition to the history and the radiological examination, suggestive of sphenoidal disease, and yet I could never get into the sphenoid except with the needle and mallet.

Dr. E. R. Bowie (New Orleans): I have nothing to add to what has already been said. I wish to thank the men who have discussed the paper.

AVULSION OF THE TIBIAL  
TUBERCLE\*

(Osgood-Schlatter Disease)

PAUL A. McILHENNY, M. D.†  
NEW ORLEANS

Search through early fracture literature reveals that fracture of the tibial tubercle is mentioned and cases reported, but it was not till Osgood in 1903, and Schlatter, later in the same year, called attention to lesions of the tibial tubercle occurring before ossification of the epiphysis is completed that this painful and often disabling condition received serious consideration from the profession. The extent of damage to the tibial tubercle varies from a slight elevation or slipping to a complete separation, and sometimes fragmentation, and is more often found at the age of puberty, though cases may occur at any age between the eighth and eighteenth years. Though occurring most frequently in boys, cases are found in girls also, but this is rare.

Many theories have been advanced as to the causative factors, among them being a primary osteochondritis of the epiphysis, a development defect of the epiphysis, a predisposition of growth centers to disease and trauma, and lastly trauma. But a primary osteochondritis or a development defect existing previously to the onset of symptoms is very difficult to prove because of the great variance in evidence as shown by roentgen ray examination. Trauma undoubtedly is the most important causative factor especially as the affection is most frequently found in those of an active athletic temperament, and a history of trauma can usually be elicited. Force applied in the same conditions which produce fracture of the patella in the adult will cause damage to, or complete avulsion of, the tibial tubercle in the child. Occasionally, direct force, such as a sharp blow to the tubercle, may be the exciting cause but such is not as frequent as the indirect force applied by the sudden contraction of

the quadriceps when the knee is partly flexed, and unless the condition is recognized early and appropriate measures instituted for its relief prolonged disability invariably follows and may carry over even into adult life.

Being identical to damage of various other epiphyses the pathology is similar, and one finds extravasation of blood, subcutaneous hemorrhage, rupture of fibrous attachments of soft parts adjacent to the epiphysis and later possibly an aseptic necrosis.

The symptoms are well defined. The patient is brought to the physician because of pain about the upper portion of the tibia and anterior section of the knee joint; both limbs may be affected, one more seriously than the other, but the condition is usually unilateral. Generally the patient will admit of having jumped from a fence, over a ditch, fallen from a low roof or having taken part in some game requiring running and jumping. Occasionally immediately after the fall, but generally a day or two later, pain is experienced at the attachment of the patella tendon to the tibial tubercle especially on complete extension of the knee and on kneeling down. Examination reveals tumefaction immediately at the tibial tubercle which may extend over the patella tendon; pain, sometimes exquisite in character, on pressure directly over and lateral to the tubercle, and possibly fluctuation in the knee joint; rarely crepitation in the region of the tubercle may be elicited especially if fragmentation has occurred; inability to completely extend the knee if only slight passive resistance is made because of increased pain. Loss of power to extend the knee is not present, though the tubercle may be completely avulsed, which fact was clearly explained by Osgood in his original article. The patient walks with a decided limp and declines to make any sudden movement with the affected limb; if the condition is bilateral the gait is awkward and restricted. In the roentgen ray examination one finds little if anything in the antero-posterior view, but the lateral view shows the tubercle to be abnormally elevated or tilted, or even completely avulsed, and occasionally fragmentation may be evidenced. Roentgen ray findings are not al-

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ways in keeping with clinical manifestations, and frequently there is considerable pain, tumefaction and disability when the roentgen ray shows only a slight elevation or displacement of the tubercle.

Treatment should be conservative, and must be continued till all symptoms have completely subsided. This may be for several months. A case seen soon after the onset of symptoms should have a posterior gutter splint moulded to the limb with the knee straight, and adhesive strapping, preferably diagonally, applied over the tubercle and knee with a pressure pad of felt directly over the tubercle to insure maintenance of replacement. As symptoms subside, the strapping may be discontinued and physiotherapy started, infra-red ray baking and gentle massage of the part being preferred. Gutter splint immobilization of the knee should be maintained until it is thought wise to allow non-weight bearing motions; the splint may then be left off at night, and gradual resumption of motions allowed. If, after several months of palliative treatment, the condition still persists operation will have to be resorted to. Two simple procedures have been advised and proved successful, the choice depending on the particular liking of the surgeon. The first consists of drilling through the tubercle into the bone; through small puncture wounds in the skin a small drill is driven obliquely through the tubercle into the shaft of the bone in various directions, this produces slight hemorrhage, furnishes fresh bone pulp, allows penetration of new blood vessels and so stimulates natural repair. The second consists of bone pegging; a curved incision is made laterally to the lower portion of the patella tendon past the tubercle and ends at the tibial crest; in the lower two thirds the periosteum is incised and reflected; two small pegs are taken from the tibia, and small drill holes are made through the tubercle. The pegs are driven through the tubercle into the diaphysis; the wound is closed and a dry dressing applied. The knee should be immobilized, after either operation, for a few weeks or until all pain has subsided. Physiotherapy and motions may then be started, and gradual resumption of normal function allowed.

#### DISCUSSION

Dr. Erasmus D. Fenner (New Orleans): I do not know that after hearing the paper of Dr. McIlhenny there is very much to be said in addition to what he has told you in regard to this condition, which is not an exceedingly frequent one.

There are a very large number of young people who present a condition of the epiphysis at the upper end of the tibia, which if subjected to a sudden strain or violence may produce the symptoms of what is known as Osgood-Schlatter disease.

The comment that I feel most inclined to make is that I feel that Dr. McIlhenny has given the impression that this disorder is generally a great deal more severe than my experience leads me to consider it. The picture he has drawn, to my mind, is the picture of the unusual and comparatively rare case of injury of the tibial tubercle. Many of these cases are much milder. They have pain, and they limp, and in most of the cases this lameness and pain and tenderness follow some exertion like running violently or jumping over a fence, or something of that kind, but in the great majority of cases they do not take five or six months to get relief. They do not need to be tied up in a splint for three or four months, and they do not need a long period of physiotherapy afterward. A considerable number of them, as a matter of fact, do not need anything but to be prevented from exerting themselves too much. If they could just be induced to avoid running and walk with a little care, many of them would get well with no therapeutics beyond that, and certainly with the vast majority of them, in my opinion, simple support on a splint for a few weeks will result in complete disappearance of the symptoms, and then the exercise of any ordinary care on the part of the patient will lead to an entire disappearance of all symptoms and no return.

There will occur cases in which the tibial tubercle is torn loose, or in which it is pulled away so badly that the symptoms last longer and need more treatment, I admit, but that is rare.

I have been practicing orthopedic surgery for many years. I have a young man in the army and another in the navy who had typical disturbance of this kind when they were around ten or twelve years of age. Another case was a relative of mine, who had both knees affected. His diversion during his college course was being the champion heavyweight boxer of his class. None of them required prolonged confinement in splint, and all of them were able to return to unrestricted activity.

I feel that these cases are not so severe, and that it is extraordinarily rare that any operation of any kind is needed, like pegging or drilling the tubercle. It might be necessary in one case



in a thousand, but not in any larger number than that.

Dr. A. Scott Hamilton (New Orleans): As Dr. McIlhenny has brought out in his paper, the etiology of this condition, Osgood-Schlatter's disease, and the other conditions affecting the epiphyses, the so-called osteochondritides, is not established. We are certainly not sure of two things: first, pathology, and, second, etiology. We are not sure of the etiology because we are not sure of the pathology.

There are in general no systemic symptoms associated with the disease. All the serum determinations for various minerals are normal. Calcium, phosphorus, magnesium, sodium, potassium levels are all as in the normal individual.

The local pathology is a different proposition. We find there what some pathologists have interpreted as an aseptic necrosis. That theory was particularly advanced by Axhausen. He postulated that the disease was caused by an embolus, and called it an embolic aseptic necrosis. That has been doubted by most pathologists as, on microscopic examination, sections did not seem typical of a true necrosis.

As to etiology, as Dr. McIlhenny has brought out, trauma is at least the exciting factor. What underlying factors there are we do not know. Various authors have advanced particularly the theory of infection. Notable among those is Phemister of Chicago, who reported a series of five cases, three of which showed positive culture. It appears however, that the cases he reviews could be classed more correctly as instances of osteomyelitis than of osteochondritis.

Recently there was reported a case where a streptococcus was isolated from a tibial tubercle. It was typical of Osgood-Schlatter's disease, with no symptoms of osteomyelitis. A biopsy was done, and a streptococcus was cultured from it.

In such cases, which are isolated, we are inclined to believe that more than likely it is due to contamination. So many biopsies have been sterile, that I believe if the technic had been aseptic during the operation, or if a true osteomyelitis had not been present, probably there would have been no growth.

Calvé has advanced the theory (at least he was the first one to advance it) that the condition is due to static demand which was more than the static capacity of the individual. Of course, that theory presupposes some underlying basic pathology, a systemic pathology, which is as yet undiscovered, which is the cause for the static capacity being low. Other theories as to etiology concern themselves with familial or hereditary influences. We find several cases reported in the literature where brothers, or fathers and sons, are affected with the condition of Osgood-Schlatter's disease. However, they are isolated cases, and when compared to the large number of reported cases, seem

to us to fall at least within the realm of coincidence, rather than as being actual factors in the etiology of the condition.

As far as treatment is concerned, I am heartily in accord with what Dr. Fenner has said. Many operations have been devised. However, in the cases we have had, we have never been forced to resort to more heroic measures than that of putting a light plaster bandage about the knee, in the position of extension.

Dr. Guy A. Caldwell (Shreveport): I am very much interested in this discussion. It seems these cases vary a good deal, depending on what section of the country they are in. I was particularly interested in Dr. Fenner's discussion. The cases that have come to me have not been great in number. As Dr. Fenner, I do not see a whole lot of them. But I can mentally note at least a half dozen that I recall easily. The symptoms have been rather severe, as Dr. McIlhenny has described them.

In my hands, with the application not only of splints but of circular plasters and rests, only one case that I can actually recall got perfectly well. The others recurred just as fast as I took the plasters off, at the end of six or eight weeks, and let them go about. I admit they were boys, most of them overweight, and they were ambitious and were undertaking all sorts of things, but they did recur, and the recurrences were troublesome.

As far as treatment is concerned, I have come to the point where I believe, since it is a rather superficial lesion and is easily accessible and you do not have to go into the knee joint in order to get at it, the easiest and simplest thing is to take the thing out. I have done that almost routinely in the last four or five cases I have had. Rather than put them through a long period of immobilization and then take it out later, I advise the parents, usually, and go right ahead and do it.

It is rather interesting to me to see where that thing is, sometimes. Let us say this is the tibial tubercle here, with the ascension of the patella tendon coming across it. I was looking here for it, and as a matter of fact the patella tendon was attached to it, and that is where most of them are. There is simply a bit of tissue here. There is plenty of attachment left for it, after you shell this out from it. Then I compress it down and tie it down in place, and they recover very nicely, it seems to me, in the minimum time.

Dr. P. A. McIlhenny (New Orleans): I was interested in Dr. Caldwell's statement of finding a tubercle pulled loose, up in the patella tendon. That would be where operative procedure would be necessary, because it would be almost impossible to replant it by a passive means. But in the number of cases I have seen, although not a great number, I have found that unless I immobilized the knee for a definite period of several weeks, there was a recurrence.

I had a condition in one of my own children, a rather active boy, about five years ago. I strapped him up for a number of days, and apparently the symptoms subsided. The roentgenogram did not show avulsion of tubercle, but showed what we thought was an abnormal elevation. I let him out, and in two weeks, running and jumping again, he had a recurrence. I kept his leg immobilized for six weeks, and continued with my palliative treatment of strapping, and he made an uninterrupted recovery.

There are cases that demand immobilization for several months, and there are cases which have been reported by various observers that have gone on into adult life, one case was 41 years of age and another 60-odd years.

## THE OCCIPITOPOSTERIOR POSITION\*

GEO. A. MAYER, M. D.†  
NEW ORLEANS

Alert, energetic and wise management of the occipitoposterior position shows its results in a reduction of the mortality both fetal and maternal, and fewer days of illness. I would like to emphasize and develop three changes from the usual viewpoint: first, a sense of urgency and aggressiveness in the diagnosis; secondly, the need for strict treatment to conserve maternal forces; and thirdly, the need for strict conservative operative practices.

The diagnosis of an occipitoposterior (henceforth referred to as O. P.) does not present much difficulty when one is a good observer. Abdominal examination before and during labor discloses a peculiar "lopsided" appearance. It is distinctly irregular even in the stout. Viewing the abdomen from the side and above, a gradual slope more or less scaphoid is noted from the symphysis to a point well above the umbilicus. By stimulating the uterus to contraction this is quite evident. To one side of the midline, a shoulder below and a hip above can be palpated. The cephalic prominence or chin is found on the opposite side. A well rounded abdomen with the apex at or below the umbilicus in occipitoanterior

position is a marked contrast. Having pointed out to the interne this contrast in appearance, he or she rarely fails in the diagnosis, at least they are active and realize the urgency of correct diagnosis. It helps them in the differential diagnosis between a breech, O. P., or a normal O. A. with the head against the perineum.

It has been estimated that 95 per cent of all cases are vertex presentations at the beginning of labor. In approximately one-third of this number the occiput is directed posteriorly 135 degrees, the right predominating. The mechanics in the posterior positions present one main difference from that in the anterior position—rotation in the former takes place through a 135 degree arc, while the anterior describes an arc of only 45 degrees. The normal mechanism is occiput anterior, the suboccipitobregmatic diameter being the most favorable cephalic diameter to engage into the pelvic inlet. Any other position is due to failure of normal forces, be they abnormal uterine development, postmature babies, pelvic deformities or contractures, or a combination.

Aggressiveness in taking a history, measuring a pelvis and making an examination, resorting to roentgen ray examination when needed, will change DeLee's statement namely: "That more children are lost from O. P. presentations than are lost from the effects of a contracted pelvis."

The diagnosis does not complete the responsibility of the obstetrician, it is on the contrary a signal to conserve the maternal forces, protect her against infection, and to favor the spontaneous rotation to an anterior position. The usual tendency is to excite these unfortunates by having them bear down with great force before the second stage has been reached. This is to be deplored. The present day view is to stand by, watchful waiting, ameliorating the uterine contractions by slowing their intensity and duration, and preserving the fluid balance and mental outlook of the patient. This is done by giving morphine gr. 1/6 with scopolamine gr. 1/200, or one of the barbaturic preparations in moderate doses just short of excitement, or a combination. Towards the

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end of the first stage one may use Gwathmey's oil-ether-quinine rectal analgesia. When accessible, nitrous oxide and oxygen are of great value. During the time, drinks containing lactose and sucrose are given at frequent intervals as tolerated.

The barbiturates are very effective in relieving the annoying backaches and groin pains of the early first stage. I have best results with sodium amytal given orally, in doses of three grains every two hours (two and sometimes three doses). If there is a slight disproportion and molding is essential, morphine gr. 1/6 or better pantopon gr. 1/3 is given by hypo. At times scopolamine gr. 1/150 in combination with the above is used and near the end of the first stage repeated alone. Morphine or pantopon is not given within three hours of the expected birth. One must be extremely flexible in the use of the drugs whose action he is familiar with and resort to the best combination for the individual case. During the second stage, I have had best results where a delivery was instrumental by using spinal anesthesia, 150 mg. novocain. However, great discretion is used in its use and application to select cases. Sacral analgesia has given good results when the head was arrested in the pelvis as well as for ordinary Scanzoni rotations and delivery.

This slowed uterine action permits the thorough obliteration of the cervix and its dilatation by the forewaters and vertex. It also gives us time in which to assist the uterus in turning the body of the baby to a forward position. This is accomplished frequently by having the patient assume a position on her side corresponding to that on which the baby's back was palpated. Just how this helps is not quite clear in my mind. The roentgenograms show the anterior shoulder together with the uterus pushed nearer the midline. Is it not possible that the shoulder is better able to pass over into the opposite quadrant? Another good position to have the patient in is a semi-reclining posture in a rocking chair tilted backwards. We thus rightly assure that internal rotation is due to a little more than the mechanical factors of the pelvis. A number

of writers have presented evidence that the uterus may be a rotator.

The type of pelvis that is associated with O. P. cannot at present be agreed on, as it is a condition that is found in all types of pelves. However, the pelvis with a narrow ischial interspinous diameter (9.5 cm. or less) according to S. Hanson, gives 18 per cent more persistent O. P. Thoms, on roentgen ray pelvimetry, believes the transversely contracted pelvis is responsible, while Caldwell and Mallory find the funnel or masculine type pelvis presenting factors possibly explaining O. P. While accepting these observations, how can one explain the fact that in many O. P. positions in which the head has not entered, or cannot enter with the occiput behind, a change to the anterior position allows of easy descent? It is not always a question either of flexion, for in the majority flexion is well preserved. A summary as to causes points strongest to an inability of the fetal trunk—the back and so the shoulders—to move forward towards the symphysis, for so long as the shoulders are prevented from rotating, so long must the rotation of the occiput fail. This is a frequent cause of failure in attempts at either manual or forceps rotation of the occiput in the pelvis, inasmuch as on the removal of the hand or forceps, the occiput immediately swings back to its original position. Finding an internal contraction ring situated around the child's neck, or just in front of the shoulders, the lower border of the active uterus, has been the experience of Sidney Smith in the Brooklyn Hospital series. I have had this reality to confront me. Having reached the point where operative treatment is indicated, the colpoeuryneter may be used to secure dilatation in a very small percentage of cases when the membranes have ruptured early. Operative intervention is rarely necessary however, before the advent of the second stage, when a prophylactic forceps, with or without episiotomy, may then be considered optional.

The time factor is our best ally. Given enough time 70 per cent will rotate anteriorly. The baby, with its mother's resources well supported and preserved, will have weathered the



first stage with little damage. The second stage can be terminated as the dexterity of the obstetrician surveys the demands of the individual case. I wish at this time to broach the subject of vaginal examinations. It has been my policy to make vaginal examinations only when definite information is desired. Rectal examinations suffice to record the condition of the cervix. The bladder fills easily during these long labors and should be emptied by catheter every four hours. In neglected cases it is possible to find a bladder holding 800 cc. or more, giving the abdomen the appearance of a camel's back with two humps.

In another group, about 4 per cent of the cases, the head remains floating or high in the pelvis, even after complete or nearly complete dilatation. The procedure of version and extraction, especially if the membranes are intact, is the choice in multipara. Spinal or ether anesthesia may be used as complete relaxation is desired.

In the remaining 26 per cent of the cases, the head is found molded and arrested at various levels within the pelvis. The occiput may be sacral or transverse as well as it may remain a posterior throughout. The aim ultimately is to rotate, with a minimum damage to the baby and maternal structures, the occiput to an anterior position. There are a number of methods, in competent hands giving good results, the forceps or the hand of the obstetrician being used to rotate the occiput. It naturally follows that the best results will be obtained by the method to which the operator has best trained himself. When one has been trained in more than one method then it is possible to individualize and so serve the end best. Interference at this time is conservative as it releases the baby from the vise-like hold of the cervix, thereby reducing the incidence of asphyxia.

Scanzoni in 1865 devised the method of rotation and traction later modified by Tarnier (sweeping the handles of the forceps through a large circle to effect the rotation of the head), but many injuries were attributed to this operation. Bill, of Cleveland, really showed the correct mechanics of the method

introduced by Scanzoni. It is as follows: rotation without traction after thoroughly lubricating the vagina and the babe's head with a neutral soap. After a rotation anteriorly to the zero position, in the same plane it occupied at the beginning of the operation, traction is made lightly so as to fix the head in the new position. The blades are removed and re-applied with the pelvic curve upwards, i. e. pointing to the occiput. The delivery is completed as is that of any other anterior position. This method is popular and has universal use. Kielland forceps with their special type of blades are an outcome of this method of delivery. Seides, with his "two forceps manoeuvre" and DeLee with his "key-in-lock" operation, are well described in all books. Another method, popularized by Danforth, is gaining favor. The occiput is manually rotated to an anterior position 45 degrees and the forceps applied. The technic of this operation is neither difficult nor dangerous. The hand is introduced into the uterus followed by the forceps; clean cases are therefore a requisite. There is a small percentage in which prolapsed cord might occur, but even thus one could deliver before asphyxia.

In all these procedures, it must be remembered that art and gentleness, sustained by patience, are paramount, not force.

#### CONCLUSIONS

1. Diagnosis is essential especially in any labor.
2. Occipitoposterior positions are not to be neglected. Nature cannot take its course properly, it is in error.
3. Watchful waiting with supportive measures during the first stages is indicated, not meddling obstetrics.
4. Rotation where nature fails either manually or with forceps, during the second stage, is conservative.

#### REFERENCES

- Bill, A. H.: The modified Scanzoni manoeuvre, *Am. J. Obst. & Gynec.*, 60:342, 1925.  
 DeLee, J. B.: *Principles and Practice of Obst.*, 5th ed.  
 Jarco, J.: The role of posture in obstetrics, *Surg., Gynec. & Obst.*, 48:257, 1929.  
 Rudolph, L. and Ivy O. C.: *Am. J. Obst. & Gynec.*, 19:317, 1930.  
 Pieri, R. J.: *Surg., Gynec. & Obst.*, 50:1032, 1930.

## DISCUSSION

Dr. Hilliard E. Miller (New Orleans): I should like to congratulate Dr. Mayer on his excellent demonstration and on his good paper.

I personally have always favored extreme conservatism in the management of these cases. A great many new recommendations are brought forth from time to time, such as disengagement of the head with manual rotation, application of forceps, disengagement with rotation of shoulders, to force the head to engage in the new diameter, and so on. But I believe the policy of waiting for sufficient molding and supporting the patient with small doses of morphine, is probably the best routine for handling these cases.

The Scanzoni maneuver is, of course, indicated occasionally, but not in as many instances as is frequently recommended. I have had but one occasion to use such a procedure in the past 10 years. We must not forget the mechanics involved in an occipitoposterior presentation. In such cases, there is always a disturbed flexion which means that the head is extended anywhere from a mild to a very extreme degree. Under such conditions, it is readily seen that the long diameters of the baby's head are trying to come through the pelvic diameters first. This, of course, is almost a mechanical impossibility, until such time as sufficient molding has occurred to permit ready descent of the fetal head.

In such cases, after sufficient molding has occurred, and the head has descended to the level of the ischial spines, rotation to an anterior position may frequently be accomplished with ease by flexing the head with the fore-finger, and rotating the occiput to an anterior position, by inserting the middle finger of the right hand against the sagittal suture, and turning the head through an arc of approximately 90°. Flexion may also be encouraged by pressure on the breech.

With the head rotated to this new position, it is best to hold same until patient has assisted by voluntary efforts through two or three subsequent pains. Occasionally, two or three minims of pituitrin are given when the head has been rotated anteriorly, and this helps to fix the head in the new position and stimulates a healthy type of pain, driving the head almost immediately to the perineum.

I do not advocate nor practice rotation of the head with forceps, irrespective of what plane it may have reached in the maternal pelvis. Where a Scanzoni maneuver is contemplated, forceps are applied with the head in a posterior position. Sufficient traction is made to bring the head onto the perineum; here without any assistance the head will be rotated by the same factors which would have rotated it anteriorly had the labor been allowed to proceed normally. After the head is rotated to an anterior position, forceps are re-

moved and reapplied, and the head is delivered.

In conclusion, I should like to state that the most important single factor in the management of the occipitoposterior positions is allowing sufficient time for the pains to mold the fetal head before any method is undertaken to deliver the baby.

Dr. Walter E. Levy (New Orleans): When one gets up and routinely congratulates an essayist, it is begging the question for an opening. I believe that Dr. Mayer is to be congratulated, not only on his subject matter but on the presentation of his picture. I have been playing with movies in obstetrics for quite a while, but have never accomplished what Dr. Mayer has. I think it is most beneficial, and particularly when brought to general meetings like this.

I think the thought expressed by Dr. Mayer in favor of watchful waiting for an occipitoposterior is the best thing we can do. We find that about eighty to eighty-five per cent of the cases will rotate if given time, but it is the persistent occipitoposterior that will usually give the obstetrician trouble. Caldwell, in his recent paper, showed that the occipitoposterior was very prone to occur in two types of pelves, the anthropoid which is an oversized pelvis, and in the funnel type.

I absolutely subscribe to the remark made by Dr. Miller, as regards his interpretation of the Scanzoni method. I think to attempt to wrench a head around is a pitiful acknowledgment that you do not know what you are doing. If you let the blades rotate of their own accord, as he suggested, you will find you are going through the mechanism of labor. The application of forceps does not supplant the mechanism of labor, but aids it. It was stated that if the occipitoposterior wants to stay in a posterior position you should let it stay that way, and you will kill less babies.

It was brought out that the forceps are only to be applied in the lower arrests. The higher in the pelvic plane you attempt to use forceps, the less likely you are to have success.

One thing we go by is the heart sounds; if to the right you are usually dealing with a right occipitoposterior, as the sagittal suture usually engages in an oblique diameter.

Dr. Joseph W. Reddoch (New Orleans): In 1933, I had occasion to examine the first 160 cases that were delivered on the out-service of The Hutchinson Memorial clinic at Tulane. In approximately 160 cases that had been delivered up to the time I finished my survey, there were about forty per cent occipitoposteriors. That, probably, is just a little higher than the statistics we usually see. I believe it was Scott who reported a thousand cases in which the occipitoposterior position was noted in only about nine or ten per cent of the cases.

As far as the diagnosis is concerned, I think Dr.

Mayer's idea of a flat scaphoid camel's-back type of abdomen is worthy of consideration. We have more or less followed the routine that Dr. Levy mentioned. When the heart sounds are found on the right side we usually consider it as a possible occipitoposterior and treat it as such until the case has been diagnosed as an occipitoanterior.

I wanted to mention the cases where the occipitoposterior position is found in a low percentage. We believe that those cases are not diagnosed until late in labor. To parallel the series of cases from the Hutchinson clinic, I went over about six months' deliveries at Charity Hospital and found that the percentage of occipitoposteriors so diagnosed was around fifteen per cent, which would mean they were not recognized until arrest had practically taken place.

We have not checked our bispinous (ischial) diameters. As a matter of fact we have not been able to find any accurate means of measuring that diameter routinely in our out-clinic patients.

In the 160 cases that I went over, approximately eighty-five per cent rotated spontaneously. I want to emphasize that, because these cases were delivered in the home, were watched carefully and rather constantly by Senior students, and of that group there were only about two, or possibly three cases that required forcep rotation. The heads usually came down, and low forceps were used on some, and in those of the fifteen per cent that had to have some operative delivery, the manual rotation generally sufficed.

I want to emphasize Dr. Miller's point of flexing the head. That has been considered as one of the causes of unrotated occipitoposteriors. In our cases where that diagnosis was made, after one or two hours of severe pains, we made an effort to flex the head, even though molding has already taken place.

Dr. T. A. Deckle (Jonesboro): I should like to make just this little comment: The doctors who have already spoken are all town doctors, and I know there are country practitioners here to whom this may be interesting.

In making a diagnosis of occipitoposterior positions as well as other abnormalities, it is necessary to see the patients before they are in labor, and that is the failing that most of the country practitioners have not recognized. They do not have them come in for prenatal treatment, and they get into a good many bad scrapes from neglect. This is not always the patient's fault, because it is up to us as country practitioners to educate the patients to take prenatal as well as postnatal care.

Dr. George Mayer (New Orleans) closing: I wish to thank the members for discussing the paper. I was prompted to write this paper by seeing cases sent in, principally to Charity Hospital, in whom occipitoposterior positions were not even suspected of being present. The cases had been pushed, had been walked all day, were exhausted and toxic, as the bowels had not been attended to. The neglected patients thus coming in led us to resort to life saving measures and often embriotomy. As Dr. Deckle said, in the country it is hard to see the patients before they are in labor. The value of following these patients early and working with them is seen, and we take the students at the present time and show them the value, and the importance, of making abdominal examinations, listening to the heart tone, noting the area in which it is heard, and suspecting an occipitoposterior position, particularly when the scaphoid abdomen is seen, until it is proved otherwise. In that way we are able to reduce the persistent occipitoposteriors to a minimum of fifteen per cent, while eighty-five per cent rotate spontaneously. Assistance is given with minimum trauma, after nearly complete or complete dilatation, with a lot of soap, much patience, and the use of the hand. When operative procedure is decided on, the hand is usually inserted into the cervix to make a positive diagnosis. While the hand is there, it is easy to rotate the occiput and apply the forceps, and that is what I wanted to bring before you.

I want to thank my students and the internes for the help they gave me in making this picture.



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### GO TO LAKE CHARLES!

In about three weeks from the time that this will be read there will occur at Lake Charles the annual meeting of the Louisiana State Medical Society. Now is the time, if you have not already done so, to tell your patients that you are going to be away from the 27th to 29th of April and that only death or a hurricane can keep you at home at this time when the important convocation of the State Society will take place.

A splendid scientific program has been arranged by the Chairmen of the several sections. There will be a feast of good, practical,

worth while clinical talks and essays. They alone make invaluable the time spent at Lake Charles. As a matter of fact the main reason for attendance at the State Society meeting should be the occasion of brushing up on things medical, surgical or in other types of specialties and the opportunities afforded of hearing what those who are interested in the subject have prepared for their listeners; always the spoken word and the personality of the man who is speaking leaves a more definite impression on the mind of the auditor than does the written word to the reader. It is nice also to hear what others think about the paper and sometimes the chance is given to dispute with the essayist in his statements and conclusions. All this is of value to any medical man.

Aside from scientific aspects of this meeting, the program which has been arranged by Dr. Howell to entertain the visitors should accelerate the impetus to go to this lovely city of Lake Charles. Not only will the members have a good time but also their guests. Altogether it looks as if this meeting will be the best the State Society has ever held and the physicians of the city are prepared to extend a cordial and welcome hand to the visitors to the State meeting.

### SURGEON GENERAL CUMMING AND HIS ANNUAL REPORT

It is distinctly a loss to the medical profession at large to have Surgeon General Cumming of the United States Public Health Service retire. Always he has been most interested in the various problems that confront the doctor and always he has been most punctilious in preserving the rights of the practicing physician. The retirement of Dr. Cumming will terminate the career of this most distinguished Surgeon General who has had the very remarkable record of serving in this position for 16 years and receiving appointment from four different Presidents. During his term of office the United States Public Health Service has undergone very great extension in the character of its work. This is best exemplified by a brief summary of his last report to Congress.

In this report Surgeon General Cumming states that health conditions throughout the

country remained good. The death rate for the last fiscal year was approximately that which it has been for the last four years. During this time the birth rate has increased. There were 94,000 more babies born in the United States than in the previous year. Prior to this the birth rate had been decreasing for several decades. The death rate from typhoid fever was 3.3 per 100,000 population as contrasted with a rate of 35.9 in 1900. The death rate of diphtheria was also 3.3 compared to a death rate of 43.3 in this same year, a magnificent demonstration of what can be done by modern public health science. The tuberculosis rate for this year was 56.2, the lowest ever listed by the Public Health Service.

It is rather interesting to note that in the diseases peculiar to the South pellagra continues to decline as it has been since 1928, the rate being 3.3. Dengue fever was reported in a large number of cases in Georgia, Florida and Alabama. A goodly number of cases of smallpox were reported from the South also. It is interesting to note that there were 254,551 cases of syphilis and 161,810 cases of gonorrhea reported to the Public Health Service, figures which are, of course, of no value whatsoever as the ratio of syphilis to gonorrhea is usually about 1 to 3. It is estimated that of syphilis about one half the cases are reported and probably not more than one tenth of those with gonorrhea.

In protecting the health of the citizens of the United States it is of some moment, as demonstrating the value of this service to the citizenry, that a very large number of cases of cholera were reported in Asia, innumerable deaths from plague occurred, smallpox was rife in Asia and Africa and typhus fever showed about 100,000 cases in Eastern Europe, yet these diseases, and yellow fever did not occur in a single instance in the United States.

The Public Health Service, through the very well known National Institute of Health and various field laboratories, is conducting an extensive campaign by its Division of Scientific Research in investigating the causes and effects of disease, besides taking up innumerable other public health investigations. The activities of the service are so numerous as to pre-

clude the possibility of mentioning them all in this brief summary of the yearly report of the service. The Division of Venereal Diseases is extremely active while the Division of Mental Hygiene is doing splendid work. The Marine hospitals and the quarantine service, both foreign and interstate, are accomplishing much to preserve the health of the country.

It is interesting that the successor of General Cumming has already been selected. He is one of the outstanding men in this country in public health work and should make a fitting successor to his distinguished predecessor.

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### AN IMPORTANT MEETING

The week before the Louisiana State Medical Society meeting there will be held in New Orleans one of the truly great National meetings. At this time the National Tuberculosis Association will hold their annual convocation. Thursday and Friday will be devoted to section meetings of which there are four: pathologic, clinical, sociologic and administrative. On Saturday morning there will be held the joint symposium devoted largely to tuberculosis among different people. In addition to the scientific program a general meeting will be held Wednesday night and on other evenings will be arranged round table conferences which should develop most interesting discussions in regard to the various phases of tuberculosis. These informative presentations and discussions are in some respects more attractive than some of the scientific sessions that are formal. A very full social program has been arranged as well as the scientific for the benefit of those who come as guests or visitors. Taking it all in all this meeting will be one of the outstanding events in medicine this year in Louisiana.

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### MUMPS ORCHITIS

One of the very common diseases to which children are heir is mumps and one of the most common complications in the male child is orchitis. Fortunately most children develop mumps before they obtain sexual maturity and equally providential is the fact that orchitis is

not nearly as likely to develop at this age period. On the other hand it is one of the most dreaded and feared complications in the male who has passed the age of puberty. A recent study by Alfred Stengel, Jr.\* discussed in much detail the various factors that have to do with this complication. The orchitis is regarded as a metastasis localizing in the testes but there is no concensus of opinion as to the explanation of why this takes place. The infective material may be transmitted from the mouth to the penis by the fingers or there may be glandular affinity and localization. Trauma of the testes seems to predispose in a few cases.

This complication in a very large series of patients occurs in 18.2 per cent of cases and the majority occur between the age of 18 and 30. The diagnosis of orchitis of course is made without difficulty. Rise in temperature after the swelling of the parotid gland has gone down, tenderness in the testicle soon followed by rapid swelling are the initial expressions, then the patient develops the usual other symptoms, the whole affair running a course of about 10 days. Interesting to note that the condition is usually associated with a leukocytosis.

The physician experiences no difficulty in realizing what has gone wrong but frequently it is extremely difficult to give an accurate prognosis. There is a good deal of rather loose writing concerning future impotence and sterility; the former seldom occurs but there are untold thousands of women who have had curettements and even abdominal operations because of failure to have children when, as a

matter of fact, the husband has been sterile as result of mumps orchitis at some time in his past. There are not many cases of sterility reported in the literature but that sterility is a common condition is known by most physicians. Occasionally in the sterile male, feminism occurs with the development of eunuchoid voice, enlarged breasts and the usual expressions of this condition.

The prevention of the orchitis is of course extremely important. The first measure, according to Stengle, is the prevention of the disease, mumps, but all measures that have been tried seem to be of very little value. In the prevention of the complication of orchitis, boiling of utensils, cleansing of the hands and so on which are done to prevent infection from reaching the urethra, are useless. Bodily activity seems to play no part but convalescent serum may have some slight effect. About the best that can be done is to keep the patient absolutely at rest with elevation of the testicle, the use of a suspensory bandage and a cold pack; these measures seem to be the limit of treatment. The use of convalescent serum should of course be given consideration. It is rather thought provoking that the hypodermic use of antuitrin S has been suggested as a means of alleviating sterility produced by mumps.

A careful perusal of this paper by the younger Stengle might well repay the medical man who probably does not realize the amount of work that has appeared in the literature on this very common and always disturbing complication of an extremely mild disease whose after-results are to be feared, but whose course is decidedly benign.

\*Stengle, Alfred, Jr.: Mumps Orchitis. *Am. J. Med. Sci.*, 191:340, 1936.

## HOSPITAL STAFF TRANSACTIONS AND CLINICAL MEETINGS

### OCSAR ALLEN TUMOR CLINIC CHARITY HOSPITAL New Orleans

The Scientific meeting of March was called by Doctor James T. Nix, director. The essayist was Doctor Emmerich von Haam, who presented the following paper.

#### ADAMANTINOMAS

Tumors of the mouth may develop from any organ or tissue which enters into the composition

of the oral cavity. Their wide pathologic-anatomical variations, as well as their apparently close correlation with chronic inflammatory processes, have always been points of extreme interest for the clinician and the pathologist. The largest group of malignant tumors of the mouth is without doubt the carcinomas arising from the squamous epithelium of the mucous membrane, a group which was responsible in 1924 for 3.43 per cent of all cancer deaths in the United States, (Stout<sup>1</sup>).



In contrast to this frequency of epithelial tumors arising from the oral mucous membrane, tumors developing from the dental structures are only rarely observed and are not an important factor in the cancer problem. Still, while the number of deaths caused by tumors of dental origin is certainly negligible, they are of considerable interest because of their striking morphological characteristics and their mode of development. Such growths are listed by Moorehead and Dewey<sup>2</sup> as "tumors of the dental system" while Walderon<sup>3</sup> discusses them under the broad term "odontomas." Since the fundamental work of Mallassez it has become generally recognized that all cystic odontomas are derived from the so-called paradental epithelial debris—small groups of epithelial cells which can be found in the embryo along the borders of the teeth embedded in the jaw, and which may persist in the adult.

A most important representative of this group is the adamantinoma or the multilocular cystic epithelial odontoma. It can be found in the tooth-bearing parts of the mandible, less frequently of the maxilla and can occur from early childhood to late life. In a series of eight such tumors recently diagnosed by biopsy at Charity Hospital, the age incidence was between 21 and 65 years. Seven of the patients were negroes. Four were men, four women. All of the tumors developed in the mandible, their most frequent location.

The clinical features of these tumors can be as varying as their histological picture. Usually slow growth is rather characteristic and Frantz reported a tumor which existed for fifty-two years. One of our patients developed a tumor mass eight years before admission to the Hospital. Another case has been under observation for four years and shows extremely slow progress of the growth. Some of the tumors, however, grow rapidly and destroy the surrounding tissue in a few months. In most cases, however, the patient comes under observation as soon as the tumor becomes palpable; this depends largely upon the location of the tumor in the bone. Very superficial adamantinomas, which resemble to a certain extent the epulis type of mouth tumor, will attract attention early, while the majority of the tumors developing in the center of the mandible reach quite a size before being noticeable.

The destructive type of growth of these tumors is characteristic of a true malignant tumor. The atrophy of the diseased part of the mandible where the tumor develops sometimes leaves only a thin parchment-like bony shell around the tumor which crepitates on pressure. The tumor then perforates the bone and infiltrates the surrounding tissues or fills the sinuses. The degree of tissue invasion especially determines the operability in

these cases. Three cases of our series were inoperable, five were treated by radical resection of the diseased part of the mandible.

The structure of the adamantinomas is usually multilocular but single cysts and solid tumor formation may also be observed. The latter are the most progressive types and are quite rare in the mandible but occur frequently in the maxilla. The single cysts vary greatly in size and are formed by the stroma of the tumor, the generally accepted neoplastic epithelial element lining them with soft gray, sometimes hemorrhagic, tissue. The lumina of the cysts may contain serous, mucoid, or thick sebaceous material. Numerous variations of this usual histological appearance ranging from the large cystic tumor with scanty islands of neoplastic tissue to the solid form with an occasional small cyst are encountered. Secondary infection with necrosis is usually observed rather late and can be explained by the slow growth of the tumor. In advanced cases such severe secondary infection accounts for the general stomatitis, edema of the glottis and aspiration-pneumonia frequently seen.

Metastases are seldom observed in cases of adamantinoma even if the tumor has become inoperable; their occurrence, however, is reported in single instances in the literature (Ewing<sup>4</sup>). Recurrence of the tumor after incomplete removal or simple curettement of the bone is very frequently observed. In two of our cases the tumor recurred after apparently complete removal, in one instance even after second extirpation. The structure of the recurrent tumor may differ from that of the original growth and, as a rule, shows a higher degree of malignancy.

The historical picture, like all the other characteristics of this tumor, is highly variable and numerous "typical" and "atypical" forms have been described in the literature. Ewing recognizes three different "main types"—acanthoma, plexiform epithelioma and glandular adamantinoma. We have attempted to correlate the rate of growth and such clinical features as tissue invasion with the histological picture observed on this basis and suggest the differentiation of four histological types. (Figures 1, 2, 3, 4). The first three types correspond to those of Ewing's classification, while the last type comprises the most undifferentiated type closely resembling carcinoma. The plexiform and the glandular types are by far the most commonly observed, six of our series being of these types. Here the presence of typical high columnar enameloblasts enclosing groups of reticulated cells provides the characteristic diagnostic feature, while in the fourth or carcinomatous type no specific

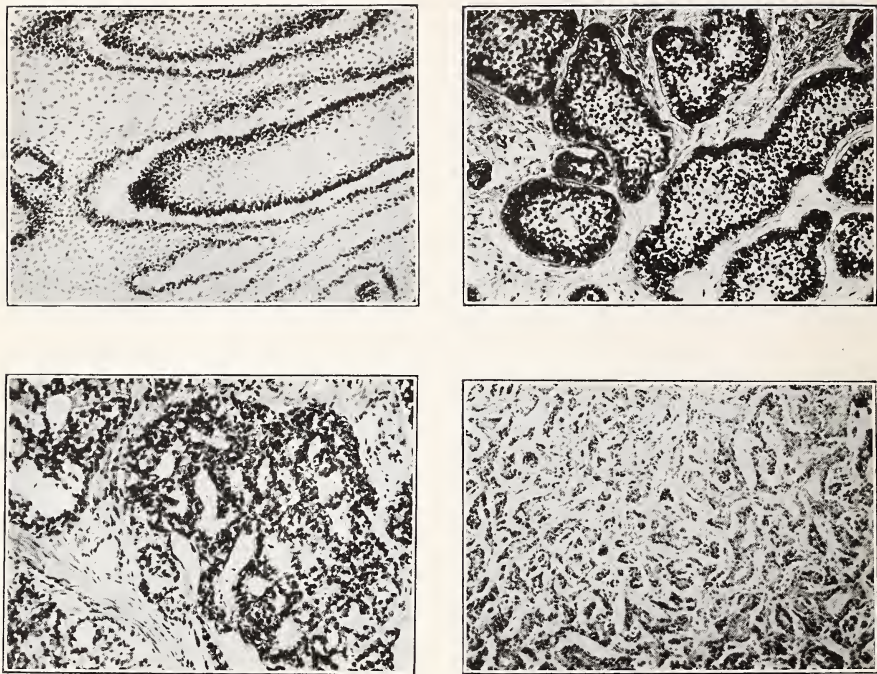


Fig. 1. The four principal histopathological types of adamantinoma. (Hematoxilin-Eosin, x 120.)

cell elements can be differentiated, the growth being very anaplastic.

#### SUMMARY

The pathologic-anatomical and histological characteristics of adamantinomas are discussed and illustrated by a series of eight cases recently observed in the Charity Hospital. Correlation of the histological features with the clinical course of the tumor is possible with adamantinoma as with other types of malignant tumors.

#### BIBLIOGRAPHY

1. Stout, A. P.: Human Cancer. Lea and Febiger, 1932:21.
2. Moorehead, F. B., and Dewey, K. W.: Pathology of the mouth. Saunders, 1925:426.
3. Bunting R. W.: Oral Pathology. Lea and Febiger, 1929:46.
4. Ewing, J.: Neoplastic Diseases. Saunders, 1929:750.
5. Endelman, J. and Wagner, A. F.: General and Dental Pathology, with Special reference to Etiology and Pathologic Anatomy. Mosby, 1927:370.

#### J. T. NIX CLINIC

New Orleans

At a meeting held in March, 1936, Doctor Philip, A. Boudreaux read the following paper:

#### BURNS IN CHILDREN

Burns in children offer a grave problem both in prevention and treatment.

Pack<sup>1</sup> reviewed the statistics of the Metropolitan Life Insurance Company and found that forty-five per cent of lethal burns occurring in the United States were in children under six years of age. The average age of the cases was three years. In sixty-two per cent of these the burn resulted from leaving a pail of hot water unprotected, or they were due to a child's pulling a kettle of hot liquid from a stove, spilling the contents over itself.

Due to the delicate and soft texture of the skin of children, a relatively greater amount of trauma is given from a lesser intensity of heat than in an adult.

Three cases of first and second degree burns in children are reported. These burns were situated in areas that presented difficulties in dressings

and prevention of contractures and adhesions because of apposition of burned surfaces. Treatment was begun by careful debridement and opening of blisters, followed by application of gentian violet in a two per cent solution.

The patients were then placed under a heat tent, care being taken that no dressings or clothing came in contact with the burned surfaces. The usual measures for relief of pain and maintenance of fluid concentration were carried out. The patients were as comfortable as possible and were free from the bother and discomfort of frequent changes of dressings. After the steps of the initial reactions were over, immersions in warm saline solution for one hour twice daily were begun. The baths were followed by careful cleansing, drying and applications of cod liver oil. Under this treatment the burned areas were kept clean and dry, and epithelialization progressed in a satisfactory manner.

Lohr<sup>2</sup> uses a cod liver oil paste and has treated one hundred and twenty-two cases of second and third degree burns by this method. He states that the treatment was no more effective in preventing the early fatalities than any other method, but he contends that the late fatalities due to secondary infections were markedly reduced. He has observed epithelialization of an area of a third degree burn forty-five centimeters square, and he is of the opinion that the effects are due to the vitamin A and D content of the cod liver oil.

Steel<sup>3</sup> reports his experience with the use of cod liver oil dressings and says it has been so successful that it is now almost his routine to treat any burn with cod liver oil. He uses lint soaked in crude cod liver oil, changing the applications every forty-eight hours, adding oil as necessary. Steel also uses this method for indolent ulcers and deep abrasions, securing healing where other methods have failed.

The following cases were seen recently, progressing well under the above mentioned method of treatment.

Case I. F. F., aged three years. On January 21, 1936, the child fell into a tub of hot water, inflicting first and second degree burns to both thighs, perineum, scrotum, penis, and buttocks. Cod liver oil was applied to the burned areas and dressings soaked in cod liver oil were placed between the thighs and other burned surfaces that were in apposition. The patient was then placed under a heat tent. Reapplication of cod liver oil was made as often as was found necessary. Healing was complete in less than two months. The largest single area to be epithelialized in this case was one measuring two and one-half inches in diameter.

Case II. J. E., aged 19 months. This child was burned on February 10, 1936, by the overturning of a pail of hot water, sustaining first and second

degree burns on the chest wall and right axilla. Gentian violet, two per cent solution, was used throughout the treatment of the case. The right axilla was badly burned, the entire area being practically denuded. To prevent contracture the arm was kept in extension by the use of a home made brace that was attached to the chest wall and acted as a table for the arm to rest on. Healing was complete less than six weeks following the injury.

Case III. E. J., aged 3 years. On January 10, 1936, the patient fell into a grate fire and received first and second degree burns about the face, forehead, scalp, right hand and forearm. The application of cod liver oil was started at the beginning of treatment and has been continued without interruption up to this time. At this writing the burns of the hand, forearm and face have completely healed, with healthy granulations present on the scalp and forehead.

#### CONCLUSIONS

1. Use of the heat tent in the treatment of burns serves the double purpose of maintaining normal body temperature as well as keeping the burned areas free from moisture.
2. Cod liver oil, though not a complete treatment in itself, is a helpful adjunct in the treatment of burns.
3. Cod liver oil is useful in preventing secondary infections and stimulating epithelialization.

#### BIBLIOGRAPHY

1. Pack, G. T. and Davis, A. H.: Burns. Lippincott, 1930.
2. Lohr, W.: Zentralblatt für Chirurgie, Leipzig.
3. Steel, John P.: The cod liver oil treatment of wounds. The Lancet, 2:291, 1935.
4. Davidson, E. C.: Management of cutaneous burns in children. Kentucky Med. J., 31:46, 1933.
5. Penick, Rawley M.: The treatment of burns with especial reference to gentian violet. Inter. Clinics, 1:31, 1933.

#### FRENCH HOSPITAL

A regular meeting of the French Hospital Staff was called to order March 13, 1936, with Dr. Strange presiding. The minutes of the last meeting were read by Dr. Baron, in the absence of Dr. McCarty. The minutes were adopted as read.

Dr. Gordon then presented a very interesting resume of two cases treated by himself in this hospital. In presenting the first case, Dr. Gordon told of how the patient had been complaining of a pain in the left side of his back, which was of four years' duration, and had been treated for various ailments, all of no avail. As a last resort he had taken spinal treatments from a chiropractor. The patient was then referred to Dr. Gordon by Dr. Ader and a pyelogram was done. The left kidney was found to be greatly enlarged and there was also a large filling defect and a calculus between the pelvis and crest of the ileum. Split P.



S. P. was zero on the left side and normal on the right. The left kidney was about 3 times the normal size. A nephrectomy was performed and the patient made an uneventful recovery. Dr. Gordon drew the conclusion from this case that too many practitioners make too light of lumbar pain, labeling it lumbago or sciatica. Dr. Gordon then presented the gross specimen from this case and showed the difference between pyogenic infections and abscesses of the kidney and those produced by tuberculosis of the kidney. This later specimen was loaned through the courtesy of Tulane University by Dr. Harris.

The next case presented was that of a white male, 68 years of age, admitted to this institution by his family physician with the chief complaint of frequency and burning on urination. Albumin and pus were found consistently in the urine. The patient was treated with bladder irrigations and discharged after a few days. After being home the patient had a recurrence of symptoms and was re-admitted to the hospital with the same complaints. A digital examination of the prostate revealed no pathology. The attending physician stated that, realizing the case was not within his line, he called in Dr. Gordon. A cystoscopic examination revealed a large middle lobe of the prostate, of the ball valve type, and the orifice of a diverticulum, so large that he was unable to examine its interior with the cystoscope. A cystogram was then done, which revealed a diverticulum larger than the bladder on the right side and innumerable small diverticuli on the opposite side, the orifices of which were so small that they could not be visualized on cystoscopic examination. The mode of treatment then became a problem. Dr. Gordon was, and is, of the opinion that the diverticuli were due directly to the back pressure of the urine, resulting from the enlarged prostate, and that the removal of the cause would be the logical course to follow. A suprapubic cystostomy was then performed and 19 days later the prostate was removed by the suprapubic route. No attempt at vasectomy was made, because of apparent difficulties, due to an enormous bilateral inguinal hernia. A pilcher bag was left in place and was removed three days later. The suprapubic wound healed promptly and completely and the convalescence was very uneventful. The patient was allowed to go home after 14 days.

The discussion was opened by Ader, who was of the opinion that the dammed back urine affected the anatomy of the bladder in such a way that the bladder wall fell between the trabeculations of this organ, producing the diverticuli. He also stated that in the past he had practiced urology as a specialty and had never seen a picture quite like this one.

Dr. Gordon stated that, in his opinion, too few

cystograms are being done today and many such cases are overlooked. He stated also that in his experience he had never seen quite such a picture presented. In answer to Dr. Ader he stated that he was of the opinion that the diverticuli were true out-pouchings of the bladder wall between the trabeculae.

Dr. Zander then stated that he agreed with Dr. Gordon that too few cystograms are being done today.

Dr. Baron then told of his relation with the patient since childhood and his deep appreciation to Dr. Gordon for what had been done in this case.

In the discussion of deaths, Dr. Messina gave the history and physical findings of Mrs. J. S., who died of carcinoma of the colon. Dr. Ané then presented the roentgen ray findings.

Dr. Messina also presented the history and physical findings on Master L. D., who was admitted to the hospital for possible acute appendicitis, and after further study and the appearance of convulsions, the diagnosis of acute gastro-enteritis with toxemia was made and proved fatal.

Dr. Howles and Dr. Zander then presented two very interesting cases.

Dr. Strange then thanked Dr. Gordon and the committee, in behalf of the staff, for a most interesting program.

There being no further business the meeting was unanimously adjourned.

R. H. McCarty, M. D., Sec'y.

#### MERCY HOSPITAL

The regular monthly meeting of the Mercy Hospital Staff was held on March 4, 1936, with Dr. George Hauser presiding.

Dr. Lloyd Hances presented a paper on "Dysmenorrhea Relieved by Superior Hypogastric Sympathectomy." This presentation described the history, anatomy, topographical anatomy, physiology, consideration of dysmenorrhea, technic of operation, post-operative results, summary and conclusion. A discussion followed by Drs. E. L. Zander, E. R. Guidry and Philip Carter.

A case report on fibroid of the posterior lip of the cervix complicating pregnancy was presented by Dr. N. J. Tessitore and was discussed by Drs. L. J. Hances and J. E. Brierre.

Dr. George Battalora read the mortality records of the preceding month. The first case was that of a white male, 54 years of age who died the same day of admission. The autopsy revealed chronic fibrous pancreatitis, with diabetes, acute cellulitis of the left leg with moist gangrene, fatty degeneration of the liver, acute toxic nephritis and splenitis, moderate coronary sclerosis and congestion of the lung.

The second case was an infant eight hours old who died 12 hours after admission. An autopsy

was performed revealing petechial hemorrhages of all organs, hemorrhagic fluid in the peritoneal cavity, cerebral hemorrhages with hemorrhagic fluid. The adrenal glands were found to be markedly enlarged and hemorrhagic. The pathologic diagnosis was hemorrhagic disease of the newborn and partial pulmonary atelectasis.

The last case was an infant six weeks of age who died ten days after admission. This was a case of hypertrophic pyloric stenosis, which was operated on the ninth day of hospitalization and expired the following day. The autopsy revealed hypertrophic pyloric stenosis, hypertrophy of the stomach and hemorrhagic infarcts of lung.

This concluded the scientific program.

Lloyd Hances, M. D., Sec'y.

#### HOTEL DIEU

The regular monthly meeting of the Staff of Hotel Dieu was held on Monday, February 17, 1936, at 8:00 p. m. in the Nurses' Lecture Room of Hotel Dieu.

The meeting was called to order by the President, Dr. E. H. Walet, and with the Secretary, Dr. J. A. LaNasa, at the desk.

The scientific program consisted of:

- a. "Continuous Drip Blood Transfusion," Lantern slides by Dr. D. N. Silverman.
- b. "Remarks on Transfusion," by Dr. L. Levy.
- c. "Typing of Blood for Transfusion," by John Couret. Discussed by Drs. Salatch, Landry, Couret, and Dimitry.

A recess of one minute was ordered by the Chairman after which the meeting resolved into Executive Session. The meeting was then adjourned.

#### THE SHREVEPORT EYE EAR NOSE AND THROAT SOCIETY

The Shreveport Eye Ear Nose and Throat Society met in regular session at the Charity Hospital, the evening of Monday March 2, 1936, at 7:30 o'clock. The president, Dr. John T. Crebbin presided. The following members were present: Drs. Crebbin, Boaz, Gorton, Bean, LaRue, and Wilkinson of Shreveport; and Dr. Carter of Marshall, Texas.

Dr. LaRue presented a young colored woman suffering from syphilitic iritis. The pupils were dilated irregularly and there were several nodules on the pupillary margin. Blood for Wassermann had been taken, but result had not been reported. After clinical examination, it was the consensus of opinion that the iritis was of syphilitic origin.

There was an informal discussion as to the advisability of changing our meetings to every other month instead of monthly as at present. It was decided to continue the monthly meetings.

This being the regular time for the election of officers, the following were nominated and duly elected:

President—Dr. L. W. Gorton

Vice-President—Dr. Roy Carter

Secretary-Treasurer—Dr. J. A. Wilkinson

J. A. Wilkinson, Sec'y.

#### NORTH LOUISIANA SANITARIUM

The meeting of the North Louisiana Sanitarium Staff was called to order February 25, 1936, by the President, with 20 members and 2 guests present. After the disposal of routine business, attention was turned to the scientific program.

Dr. Herold reported a case of pneumonia as a complication of influenza. The patient was admitted on December 13, 1935, with a temperature of 102.8° F. and in a state of marked prostration and delirium. Blood pressure was 155/74 and the total white count was 9,250 with 92 per cent polys. On the second day the white count dropped to 8,250 and the patient was given non-specific protein therapy, following which the white blood cells rose to 11,250 and later to 18,500. The diastolic pressure fell to 50 and the patient began to have considerable respiratory embarrassment; the fall in diastolic pressure and cyanosis was successfully combated with oxygen and digitalis. The non-specific protein therapy was continued and the patient had an uneventful recovery, leaving the hospital on January 21, 1936. The case was discussed by Dr. Hargrove.

Drs. Oxford and Caldwell reported and exhibited roentgenograms of a small series of fracture dislocations of the elbow. Dr. Oxford stated that very frequently either the fracture or the dislocation was overlooked, usually the dislocation of the head of the radius was overlooked in the presence of a very obvious fracture of the ulna. Dr. Caldwell, in discussing the cases, advised that in all fractures in the region of the elbow the roentgenogram should include the joint, and when a fracture of the ulna is found one should look particularly for a dislocation of the head of the radius, as dislocations of the head of the radius nearly always accompany fractures of the ulna, especially when there is displacement of the fragment. The acute fracture dislocation should be reduced and held in hyperflexion. In closing, Dr. Caldwell presented a patient who had had an orthoplasty done for a complete ankylosis of the left elbow joint that followed a suppurative arthritis. Although a very short interval of time had elapsed since operation, the patient was able to demonstrate a very satisfactory range of motion. The case was discussed by Drs. Abramson and Rigby.

H. M. Trifon, M. D., Sec'y.

## TRI-STATE HOSPITAL

The Tri-State Hospital Staff met February 27, 1936. Following a dinner and the disposal of routine business, the scientific program was presented with Dr. H. B. Wren presiding.

Dr. B. J. Cole presented the case of a one year old child, who had had repeated respiratory infections throughout his life. A severe cold had developed one week previous to hospitalization and numerous convulsions had occurred. Because of respiratory difficulty, a tracheotomy was necessary. A roentgenogram of the chest suggested a foreign body in the left bronchus and a bronchoscopy done by Dr. L. W. Gorton revealed an occlusion of the bronchus with thick mucus. The mucus was removed with subsequent clearing up of the left lung pathology. Shortly afterwards, lobar pneumonia developed in the right lung. The patient is now convalescent. Drs. Lucas, Corliss, Rigby, Kerlin and Gowen entered into the discussion of this case.

Dr. W. S. Kerlin presented a case of a white male, 36 years of age, who had developed an acute respiratory infection followed by pain in the lower left chest and the presence of profuse purulent sputum. Two weeks later, upon admission to the

hospital, signs of consolidation were present in this area and asthmatic rales were present throughout the lung field. The history revealed three upper respiratory tract operations during recent years, the last of which had been done one year ago. Bronchial asthma dated from a previous sinus infection. A diagnosis of pulmonary abscess was made and a skiagram revealed a cavity involving almost the entire lower lobe. Postural drainage was instituted, neo-salvarsan administered and after 15 days a recheck by roentgen ray examination revealed the cavity almost closed. He was discharged from the hospital and made good progress except for the continuation of the asthma. After six weeks, lipiodol was instilled and repeated at intervals. This procedure afforded relief from the asthmatic attacks. The patient is making excellent progress, demonstrating what can be accomplished in these cases with conservative measures. The case was discussed by Drs. Jones, Gowen and others.

After discussion of the statistical reports, the meeting adjourned.

J. E. Knighton, Jr., M. D.,  
Acting Secretary.

## TRANSACTIONS OF ORLEANS PARISH MEDICAL SOCIETY

## CALENDAR

- |          |  |          |  |
|----------|--|----------|--|
| April 1  | Clinico-Pathological Conference, Touro Infirmary, 11:15 A. M. to 12:15 P. M. | April 20 | Special Meeting, Orleans Parish Medical Society, 8 P. M.                     |
| April 1  | Board of Governors, 1st and 2nd District Dental Society, 8 P. M.             | April 20 | Hotel Dieu Staff, 8 P. M.  |
| April 1  | Mercy Hospital Staff, 8 P. M.  | April 21 | Charity Hospital Medical Staff, 8 P. M.                                      |
| April 3  | Pathological Conference, Hotel Dieu, 11 A. M. to 12 Noon.                    | April 22 | Clinico-Pathological Conference, Touro Infirmary, 11:15 A. M. to 12:15 P. M. |
| April 6  | Board of Directors, Orleans Parish Medical Society.                          | April 24 | Pathological Conference, Hotel Dieu, 11 A. M. to 12 Noon.                    |
| April 6  | Eye, Ear, Nose and Throat Hospital Staff, 8 P. M.                            | April 27 | House of Delegates, Louisiana State Medical Society, Lake Charles.           |
| April 8  | Touro Infirmary Staff, 8 P. M.   | April 28 | Baptist Hospital Staff, 8 P. M.  |
| April 10 | Pathological Conference, Hotel Dieu, 11 A. M. to 12 Noon.                    | April 29 | Clinico-Pathological Conference, Touro Infirmary, 11:15 A. M. to 12:15 P. M. |
| April 10 | French Hospital Staff, 8 P. M.   |          |  |
| April 13 | ORLEANS PARISH MEDICAL SOCIETY, 8 P. M. First Quarterly Executive Meeting.   |          |  |
| April 14 | Charity Hospital Dental Staff, 8 P. M.                                       |          |  |
| April 15 | Clinico-Pathological Conference, Touro Infirmary, 11:15 A. M. to 12:15 P. M. |          |  |
| April 15 | Charity Hospital Surgical Staff, 8 P. M.                                     |          |  |
| April 15 | 1st and 2nd District Dental Society, 8 P. M.                                 |          |  |
| April 16 | Eye, Ear, Nose and Throat Club, 8 P. M.                                      |          |  |
| April 17 | Pathological Conference, Hotel Dieu, 11 A. M. to 12 Noon.                    |          |  |
| April 17 | I. C. R. R. Hospital Staff, 12 Noon.   |          |  |

During the month of March besides the regular meeting of the Board of Directors, the Society held three joint meetings with the following organizations: The Southeastern Surgical Congress, March 9; the New Orleans Gynecological and Obstetrical Society March 11; and the Southern Section of the American Congress of Physical Therapy, March 23. Interesting papers were read by visiting men and discussed by the local doctors.

Two of our members were honored at the meeting of the Southeastern Surgical Congress, Dr. Rudolph Matas and Dr. C. Jeff Miller. Dr. Matas was decorated with the medal of a commander of the Order of Carlos Finlay and received a diploma of Honorary Fellowship in the Academy of Medi-



cine of Havana. Dr. C. Jeff Miller assumed the duties as President of the Southeastern Surgical Congress.

Applications for Interne Membership of the Interne Corps of Baptist and Mercy Hospitals have been received and are posted on the Bulletin Board in the office of the Society. We hope that the other hospitals will follow suit and send in applications for their internes.

The following applications for Active Membership have been received: Drs. Frank Gambino, Jr., Edwin R. Guidry and Henry D. Ogden.

The Longer Life Week Committee has been making plans for its Annual Longer Life Week which will be held the week of May 18. It is planned to make Appendicitis the subject this year in an effort to reduce the mortality of this disease. The members are urged to cooperate as much as possible in order to make this campaign a success. Won't you volunteer to give a talk before a luncheon club, school or over the radio? WE NEED YOUR HELP.

The Maternal Welfare Committee has been very active during the past month. There are several matters of importance being discussed by this committee.

The Safety Committee met during March to discuss plans for "Safety Week".

#### TREASURER'S REPORT

ACTUAL BOOK BALANCE: 1/31/36 .....	\$1,325.23
February credits: .....	\$1,909.97
	<hr/>
	\$3,235.20
February expenditures: .....	\$1,179.97
	<hr/>
ACTUAL BOOK BALANCE: .....	\$2,055.23

#### LIBRARIAN'S REPORT

During February, 759 books and journals were circulated to doctors or about 1½ to each member of the Society. In addition, 1259 volumes were loaned to students, making a total of 2,018. These figures do not include the great use of books and journals within the Reading Rooms.

Fifty-five volumes have been added to the Library. Of these 27 were received by binding, 2 from the New Orleans Medical and Surgical Journal, 25 by gift and one by purchase. New titles of recent date are listed below.

On request of physicians members of the staff have collected material on the following subjects during February:

Polycystic kidney.

Louis Pasteur.

Malaria mortality and morbidity.

Effect of chlorine gas poisoning (inhalation).

Sewage disposal in public health.

Nasal ionization.

Dilaudid.

Therapeutic ionization in asthma.

Modern treatment of pneumonia.

Medical defense.

Health of school teachers.

Diaphragmatic hernia.

Treatment of burns.

Heat exhaustion.

Transmission of syphilis by blood transfusion.

Oxidation reduction of indigo.

Otto Folin.

Marijuana.

Vaccination against typhoid.

#### NEW BOOKS—FEBRUARY

Peters, John—Body Water. 1935.

American Laryngological, Rhinological and Otolological Society—Transactions. 1935.

American Therapeutic Society—Transactions. 1933-34.

Rockefeller Foundation—International Health Division—Report. 1934.

Jelliffe, S. J.—Diseases of the Nervous System. 1935.

Washington Institute of Medicine—Survey. 1935.

Bulloch, W.—Preparation of Catgut for Surgical Use. 1929.

Russell, D. S.—Classification of Bright's Disease. 1929.

Dudley, S. F.—Active Immunization against Diphtheria. 1934.

Jordan, L.—Eradication of Bovine Tuberculosis. 1933.

Mellanby, May—Diet and the Teeth. 1934.

Gilbert C. Anderson, M. D., Secretary.

#### IN MEMORIAM

##### THE REPORT OF THE COMMITTEE ON NECROLOGY

Not only has the Orleans Parish Medical Society set aside this evening for the Chaille Memorial Oration, but it is also the special occasion when we pay our humble tribute to those members who, in the course of the year, responded to the call into the Great Beyond, from which there is no return except in memory. In the great loss of nine members, we are sad. In the knowledge of their great service to suffering humanity, we rejoice.

By estimating the total number of years of service rendered by these physicians, we get some idea of the tremendous privilege that was theirs of contributing to the health and welfare of this community. When we reflect that their combined services of unselfish devotion to the sick and the suffering, both physically and mentally, totals more

than 400 years, we realize that no such aggregate of work can be lost to the world. The influence of such service increases as those who follow them emulate, follow in their footsteps, and benefit by the heritage that they have left. Theirs is the immortality of influence. They live on in the measure to which they contributed to human betterment. They live on in the greater service made possible because of their contributions to medical science.

Let us briefly review the careers of the nine members of our profession in New Orleans who died in the year 1935, all of whom were identified with the Orleans Parish Medical Society, the Louisiana State Medical Society, and the American Medical Association.

They are: Dr. Charles A. Borey, Dr. John C. Derbofen, Dr. C. A. M. Dorrestein, Dr. Wallace Joseph Durel, Dr. Felix Larue, Dr. Earnest S. Lewis, Dr. George A. MacDiarmid, Dr. Louis L. Rabouin, Dr. John Smyth.

*Dr. Charles Alexis Borey* is best known for his pioneer service in pediatrics. For years he was connected with the Milliken Memorial of Charity Hospital, serving as head of the staff, and was a consultant at the time of his death. Born in New Orleans, in 1872, he received his medical degree from Tulane University of Louisiana in 1895. Years of general practice preceded his specialization. In addition to his interest in the patients of the Charity Hospital, it is well known that his office practice also included an unusually large number of the city's poor. Dr. Borey died on February 27, 1935, aged 63 years.

*Dr. John C. Derbofen* was a general practitioner, but had not been in practice for the past fifteen years. The Tulane University of Louisiana also conferred upon him his medical degree, in 1899. He was interested in real estate and was for many years a director of the Acme Homestead Association. One of his special enjoyments was his country home near Covington. His death occurred on January 11, 1935, at the age of 63 years.

*Dr. Cornelius A. M. Dorrestein* was well-known as a gynecologist and surgeon. He was especially well-beloved in the Carrollton section of New Orleans, where most of his patients lived. He was on the staff of the Touro Infirmary, was a member of many civic and business organizations, and was on the Board of Directors of the Whitney National Bank. Born in Holland, in 1874, Dr. Dorrestein came to New Orleans at the age of nineteen and secured his medical education at the Tulane University of Louisiana, receiving his diploma in 1897. He died on April 26, 1935, aged 61 years.

*Dr. Joseph E. Wallace Durel* was a well-known student of tuberculosis. He was an outstanding pioneer in the treatment of that disease and was one of the early advocates of pneumothorax as a therapeutic measure. For thirty-seven years he was connected with Charity Hospital, having charge, for a large part of that time, of the buildings devoted to tuberculosis, the Breaux and the Dibert Memorial. He was a native Orleanian, a member of one of the old French families. His medical degree was from the Tulane University of Louisiana, awarded in 1897. Dr. Durel was on the faculty of the Graduate School of Medicine from 1910, and at the time of his death was serving as Professor of Clinical Medicine. He died on April 8, 1935, aged 60 years. His death removed from the medical field, the hospitals for tuberculosis, and the community, a man who, building on his own affliction, had become an authority on tuberculosis, having owned and operated a private sanitarium in Covington for tuberculosis patients, for almost thirty years.

*Dr. Felix A. Larue*, physician and surgeon, was prominent in the medical, the social, and the civic life of New Orleans. Member of a pioneer and widely known Louisiana French family, he had the advantages of education in several sections of our own country, in England, and in Paris. At the time of his death, on October 6, 1935, he was Professor of Operative and Clinical Surgery, Emeritus, in the Graduate School of Medicine of the Tulane University of Louisiana, from which University he had received the degree of Doctor of Medicine, in 1889. Dr. Larue had been decorated by the French Government for his outstanding work in administering to the French citizens and sailors of New Orleans, having also served, for many years, as physician for the French Consulate in this city. Fond of music and art, he spent many hours in the old French Opera House, of historic memory, and was keen on keeping alive old French customs and ideals. All who knew him were proud of his friendship, because of his outstanding loyalty and his unfailing courtesy. Dr. Larue was 70 years of age at the time of his death.

*Dr. George Alexander MacDiarmid*, retired physician and a capitalist, died on June 29, 1935, at the age of 71 years. Dr. MacDiarmid was a native of Ontario, Canada, and received his academic education at Pickering College, Ontario, and at McGill University. He graduated in medicine at Victoria Medical College of Toronto University, in 1886. His post-graduate study and early practice took him to New York, to various places in Michigan and to Chicago. He came to New Orleans in 1899. In addition to his interest in his profession, he took active interest in the sports,

joined several New Orleans Carnival organizations and clubs, and was a member of the New Orleans Chamber of Commerce.

*Dr. Louis L. Rabouin* was engaged in the general practice of medicine in New Orleans for 43 years, in more recent years devoting most of his time to physiotherapy. He received his medical degree from the Tulane University of Louisiana in 1892. Besides his medical activities, he was particularly interested in many civic and social organizations and in traveling. He died February 25, 1935, aged 69 years.

*Dr. John Smyth*, prominent physician and surgeon, was a native of Tensas Parish, Louisiana, and a man of outstanding accomplishment in many fields. He organized the library at Hotel Dieu, in recognition of which a tablet in his honor was unveiled at the institution in 1929. Dr. Smyth was awarded the "surgeon's military cross" as a result of his service in Base Hospital 24 in the World War. He was also cited for the Legion of Honor. He was for years Professor of Clinical Surgery in the School of Medicine of the Tulane University of Louisiana, having received his medical degree from that Institution in 1900. He was a Fellow of the American College of Surgeons and of the American Association for Thoracic Surgery and a member of the Edinburgh, Scotland, Research Society. His interests included membership in social, civic, and Masonic organizations in New Orleans. He died February 25, 1935, aged 66 years. All who knew him know of his sterling worth, his interest in humanity and in his particular field. They learned to love him well. They will mourn his loss.

I have left until last *Dr. Ernest Sydney Lewis*. We may be sure that his colleagues, whose careers we have just reviewed, would join in according him major emphasis. Dr. Lewis enjoyed almost a century of active life in his native city. To quote from a press account telling of his death—and of his life:

"With his death a great man passed from the scene, a man who had lived the many years of his life in the service of suffering humanity. His greatest gift was the gift of life to mothers and to their children.

"A pioneer in gynecological surgery in the South and in the nation, he evolved methods that saved thousands of lives. He taught these methods to hundreds of earnest young medical students. Many of these, today, are aged and distinguished surgeons. Many have gone before him."

Dr. Lewis was almost ninety-five years old when Death claimed him, on August 12, 1935. His parents were not so fortunate as he in length of years, for he was left an orphan at the age of twelve, in 1852. His uncle, his father's twin brother, was a loving and a wise guardian, however, and the boy's well-directed education enabled him to graduate as a physician from the Tulane University of Louisiana, in 1852. His career as Assistant Surgeon and as Acting House Surgeon at the Charity Hospital was interrupted by medical service in the Confederate Army. Return to New Orleans, at the end of the War, brought immediate connection with Dr. Stanford E. Chaille in the dissecting room of the medical college and appointment, in 1866, as Chief of Clinic.

From 1866 until his retirement from active teaching, in 1912, Dr. Lewis held various professorships, having been elevated to the Chair of Obstetrics and Gynecology in 1876. Such a record as his has been seldom equaled in the annals of medical education: practically a half-century; thirty-six years of active leadership in obstetrics and gynecology. Dr. Lewis performed his last operating at the age of eighty-seven. Dr. Lewis was almost continuously on the staff of Charity Hospital from 1862 until his retirement, serving under four governors as Chairman of the Board. To him belongs the credit for the establishment at the Hospital of the Training School for Nurses.

The highest honors conferred by the profession came to Dr. Lewis. He was an honorary fellow of the American College of Surgeons. In 1922 his Alma Mater conferred upon him the highest honor at its disposal, that of the degree of LL.D. in Medicine. Through the years he held many offices in professional organizations. Twice, on May 23, 1912, when, at the meeting of the Faculty of the School of Medicine, he retired from active teaching, and again, on April 24, 1922, when the Orleans Parish Medical Society celebrated a "Lewis Jubilee Night" and presented a loving cup to the great surgeon who was the revered teacher of most of its members, his colleagues publicly extolled his work with him there to hear. Said Dr. Matas, great pupil of a great teacher, to him on the second occasion:

"And you must agree, in spite of all your protestations, that a flower here and there during life is far more fragrant to our nostrils than great pyramids of roses to a dead man in his coffin."

The Lewis Jubilee Night, it will be remembered, was one of the most auspicious occasions in the annals of our Society, bringing together, as I believe it did, probably the largest attendance in



its history, of members of the medical profession in New Orleans, all coming to do honor to Dr. Lewis and to show their deep affection and great admiration of him. We were glad that we could give him these flowers while he lived; and the Orleans Parish Medical Society will always have "great pyramids of roses" for the memory of Dr. Lewis. It is fitting to quote also Dr. Matas' tribute at Dr. Lewis' funeral: "One of the greatest pillars of the temple has fallen," and to quote from the late Dr. Frederick W. Parham, on the occasion of the "Lewis Night" when he said: "His work in gynecology was entirely built up out of his own head, with the assistance he got from reading the literature of the subject, yet it was well known that his work was equal to that of any done in the country. Most of the men prominent in gynecology today owe largely their efficiency in this line of work to Dr. Lewis." Then, quoting from the late Dr. E. Denegre Martin, on the same occasion, as he presented the Loving Cup: "Dr. Lewis was the one teacher from whom we learned the most practical lessons. His lectures were always replete with facts and personal experiences interestingly told. You will need no monument to proclaim your fame, no statue to grace a hall, for your kindly words and noble deeds will e'er remain engraved on the hearts of all."

As a friend of his has aptly said: "Dr. Lewis bore the burden and carried the grief of a community for many years; he shared the joy, too, for he was friend and neighbor to all his people." So great was his charity that, being always occupied at the bedside of those who needed his ministrations, he had little time for social visiting or even for family life, although he carried deep in his heart his love of home. On one occasion, at a dinner party which both Mrs. Lewis and the Doctor were attending, someone called attention to the fact that by some 'miscalculation' a lady was placed by her husband". Mrs. Lewis remarked: "I'd like that. I see Ernest so

rarely it would be a pleasure to have a good talk with him."

In reminiscing thus of the past, I could go on for hours telling of incidences in the life of this great man, to come down at last to his outstanding qualities—his gentleness and courtesy, which predominated at all times, his kindness and charity, his keen mental vision and youthfulness of spirit, and his devotion to his chosen field which, throughout the long years of his life, had never grown less. As we know, his last major operation was performed at the age of 87, a fact which should always be incorporated in the final analysis of his career.

In closing this report, it is worthwhile to call attention to the fact that no one of these nine doctors died at an age less than 60 years. Four of them were between 65 and 72 and, as we have said, Dr. Lewis had almost reached the remarkable age of 95. Eight graduated from Tulane University's School of Medicine. The majority were at some time or other on the visiting staff of the Charity Hospital and several served their internships there; three taught in the School of Medicine; two were on the faculty of the Graduate School of Medicine and one, in each School, had the distinction of being Professor Emeritus. All were well-known for private charities, the total value of which can hardly be conceived. Seven were born in Louisiana, six of them in New Orleans.

We revere the memory of these men, gone but not forgotten.

Elizabeth Bass, M. D.,  
Chairman.

Dr. Fuchs: Let us stand for a moment with bowed heads in deference to their memory.

Dr. Bass: Mr. President, I move that this report be accepted and spread upon the minutes of the Society and that a copy be sent to the families of the deceased.

## LOUISIANA STATE MEDICAL SOCIETY NEWS

### THE LOUISIANA STATE MEDICAL SOCIETY MEETING

LAKE CHARLES

MONDAY, APRIL 27.

TUESDAY, APRIL 28.

WEDNESDAY, APRIL 29.

Plans are under way to make the 1936 Annual

Meeting of the Louisiana State Medical Society the best and largest in its history.

Lake Charles, Louisiana, is turning itself upside down and in and out, and raking up all the known keys of the city to give to the delegates and visitors. More than 800 are expected to be in Lake Charles for the three days of the convention.

The committee in charge at Lake Charles promises all the resources of the city and the surrounding country to be at the disposal of the doctors of the state. They say that truly "a good time will be had by all". All this is, of course, in

addition to the work to be done, and the wealth of information and experience to be gained by attending this meeting.

Following is a program for the meeting, together with the committees in charge.

#### COMMITTEES

General Chairman: Dr. R. P. Howell

Commercial Exhibits Chairman: Dr. Olin Moss.

Entertainment Chairman: Dr. T. H. Walkins.

Finance Chairman: Dr. L. A. Hebert.

Golf Chairman: Dr. G. C. McKinney.

Hotels Chairman: Dr. J. A. Crawford.

Lanterns and Sound Amplifiers Chairman: Dr. L. Z. Kushner.

Publicity Chairman: Dr. W. P. Bordelon.

Registration and Badges Chairman: Dr. C. V. Hatchette.

Signs and Decorations Chairman: Dr. H. B. White.

Transportation Chairman: Dr. D. C. Iles.

Convention Clinics Chairman: Dr. Ben Goldsmith.

Meeting Places Chairman: Dr. R. G. Holcombe.

Scientific Exhibits Chairman: Dr. J. G. Martin.

#### TENTATIVE PROGRAM

##### MONDAY, APRIL 27

9:30 a. m. House of Delegates—Charleston Hotel.

7:30 p. m. Public Meeting—Central School Auditorium.

1. Opening Exercises.

2. Section on Public Health and Sanitation.

##### TUESDAY, APRIL 28

9:00 a. m. Medicine and Allied Branches—Charleston Hotel.

2:00 p. m. Surgery and Allied Branches—Chamber of Commerce.

8:00 p. m. Public Meeting—Central School Auditorium.

1. President's Address—Dr. C. P. Gray, Monroe.

2. Annual Orator—Hon. St. Clair Adams, New Orleans.

3. Presentation of Medal to Retiring President—Dr. Leon J. Menville, New Orleans.

4. Inauguration of President-Elect—Dr. H. W. Kostmayer, New Orleans.

##### WEDNESDAY, APRIL 29

9:00 Medicine and Allied Branches—Charleston Hotel.

2:00 a. m. Surgery and Allied Branches—Chamber of Commerce House of Delegates—City Hall.

8:00 p. m. General Entertainment—Country Club. More specific information concerning luncheons and social functions will appear in official program.

We are especially fortunate in being able to state that Dr. A. T. McCormack, Kentucky State Health Officer and Secretary of the Kentucky State Medical Association, will deliver an address on Monday night on the Section of Public Health and Sanitation. His subject at this time will be "The Health Unit and Its Problems". Dr. McCormack has years of experience in Public Health work and his forcible manner of presentation and pleasant personality are sufficient evidence to insure a most interesting presentation.

Dr. L. J. McGehee, Professor and Head of the Surgical Department of the University of Tennessee School of Medicine, will appear on the scientific program either Tuesday or Wednesday. The title of his paper will be "Intestinal Obstruction". Here again we are assured of an unusual opportunity to hear a distinguished surgeon and teacher on a subject which should be of great concern to everyone interested in this phase of medicine.

Also to appear on our program will be Dr. George B. Eusterman, Rochester, Minn. To those doctors interested in gastro-enterology, Dr. Eusterman needs no introduction as his fame and renown run parallel with medical topics in relation to this subject.

Another distinguished guest, this time from our sister State Mississippi, will be Dr. Frank Hagaman of Jackson who will speak on the interesting subject of "Jaundice."

Added to this wonderful regalia of out-of-state talent, our own illustrious Dr. Matas will present "Francois Marie Prevost and the History of the Cesarean Section in Louisiana", on the Surgical Section.

Don't overlook the Tuesday night program. At this time our special features are the President's address and the Annual Orator. It will be a great honor and privilege to hear the Honorable St. Clair Adams. Not only is he a forcible speaker but for a number of years he has been one of the leading attorneys of our State and Nation and for several years has been very close to the medical profession on account of being Counsel for Medical Defense in our State Society.

These are some of the highlights and unusual essayists who will be with us during the Annual Meeting. Others may be announced by the Chairmen of the various Sections who have not yet completed their programs.

By all means you should not forget the wonderful program arranged for Wednesday night. On this occasion a unique barbecue, at the Country Club, with other forms of enticing food and drinks will be served, after which will follow music and dancing. A good time for all is insured so bring your wives, daughters and sweethearts along to help you enjoy it.

You can thus see from the above that the doctors of the Calcasieu Parish Medical Society and the Committee on Scientific Work in cooperation with the officers of the State Society are doing everything possible to furnish appropriate scientific attractions and also to see that you have suitable diversion in the form of interesting entertainment.

From all indications we are going to have one of the largest out-of-New Orleans meetings in the history of the State Society. Those who desire to attend should get in touch, at once, with Dr. J. A. Crawford, Lake Charles, who is Chairman of the Committee on Hotels, to make reservations. Ample accommodations for all who attend will be arranged for by this Committee.

There is an unusual combination in the make-up in the plans for the approaching meeting—a wonderful scientific program, lots of entertainment provided for by a most hospitable group of doctors in the thriving and progressive city of Lake Charles. Look for your program two weeks before the date of the meeting.

#### THE PRESIDENT

The President of the Louisiana State Medical Society was born in Mississippi but has been a resident of Louisiana since early boyhood. After attending private and public schools, he graduated from the University of Tennessee with a doctor of medicine degree in 1904. He served an internship in Franklin Square Hospital, Baltimore.

Dr. Gray began practice in West Monroe and two years later moved to Monroe where he has successfully carried on the practice of medicine up until the present time. In preparing for his specialty as a surgeon, Dr. Gray took post-graduate work at Johns Hopkins and New York Post-Graduate School and served a surgical internship under Dr. John B. Murphy, Mercy Hospital, Chicago. He has kept abreast of the times by attending at frequent intervals, various clinics in the East, at Mayo Brothers and Crile's Clinic in Cleveland.

Dr. Gray early became a member of organized medicine. He was first a member of the Ouachita Parish Medical Society in 1905 when this organization consisted of only six members. He has constantly kept up his interest in organized medicine. Several times he was President of his Parish Society and served as Secretary and Delegate to the State Society for many years. During the period 1916-1918 he was Councilor for the Fifth District and has served several terms since that time. He has variously been first, second and third Vice-President of the State Society. It is interesting to note that he has served in every capacity of the Parish and State Societies except Secretary, Chairman of the House of Delegates



Dr. C. P. GRAY

and Delegate to the American Medical Association from the State Society.

In addition to his duties and responsibilities in organized medicine Dr. Gray served for twenty years as coroner of Ouachita Parish, five terms, which is a remarkable record.

During the World War he served as medical examiner for the Local Draft Board and just before the war ended he was commissioned to the regular army prepared to go in active foreign service.

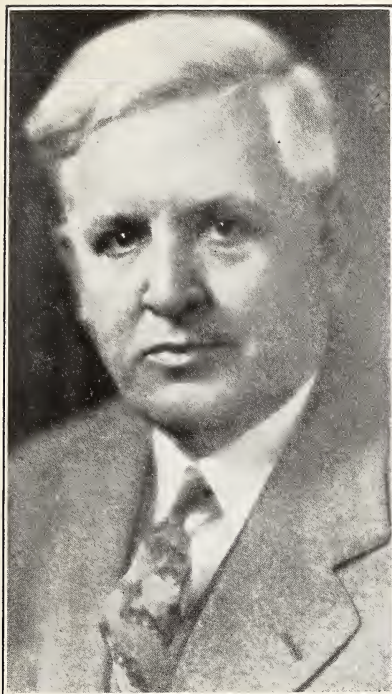
He is on the surgical staff of St. Francis Sanitarium, Monroe, and is instructor of surgery to the senior nurses of this institution.

Dr. Gray is fortunate in having a son, actively interested in organized medicine, who possesses many of the splendid attributes of his father.

#### THE ANNUAL ORATOR

Mr. St. Clair Adams was born in New Orleans in October, 1878. He is a graduate of the Law School of Tulane University and has practiced law in New Orleans for thirty-six years, now under the firm name of St. Clair Adams and Son.





ST. CLAIR ADAMS

At one time he was District Attorney of the City of New Orleans. Subsequently he was the first President of the New Orleans Bar Association.

In 1926 he was appointed by the Governor as Chairman of the Committee to draft a Code of Criminal Procedure for the State of Louisiana. The draft of the Code was adopted by the Legislature in 1928.

### THIRD DISTRICT MEDICAL SOCIETY

On March 5, the Third District Medical Society held its quarterly meeting in Lafayette, Louisiana, the following program being presented.

Renal Calculi with Special Reference to Recurrence, by Dr. Edgar Burns, New Orleans.

The Serum Treatment of Disease, by Dr. C. L. Eshleman, New Orleans.

The following officers for 1936 were elected at this time.

Dr. R. D. Voorhies, Lafayette—President.

Dr. A. A. Comeaux, Abbeville—Vice-President.

Dr. L. B. Long, Lafayette—Secretary-Treasurer.

Dr. Leo Saporito, Kaplan—Delegate.

Dr. W. A. Poche, Kaplan—Alternate.

The next meeting of the Society will be held in New Iberia in June.

L. B. Long, M. D.,  
Secretary-Treasurer.

### THE FOURTH DISTRICT MEDICAL SOCIETY

The Fourth District Medical Society meeting was called to order March 3, with seventy registered, Dr. McDade presiding. The minutes of the previous meeting were read and adopted.

A suggested outline by letter of work for the Committee on Maternal Welfare from the State Chairman, Dr. E. L. King, was presented to the society. The need of this work in Louisiana was stressed by Dr. Raymond Mays, local member of the committee. The society adopted the outline suggested by the State Committee and recommended that Dr. McDade appoint a member from each parish to cooperate with the State Committee.

A letter from Dr. Talbot, suggesting that each parish society appoint a committee to cooperate with the State Committee on Cancer was read, and upon recommendation of the society, Dr. McDade will make the appointment for each parish.

Dr. C. P. Gray gave a short talk stressing the importance of every physician being a member of the state society and supporting the state medical journal.

Dr. Talbot, our State Secretary, stressed the importance of increasing the membership of the society.

Dr. Sanderson made a short talk of welcome on behalf of the Charity Hospital.

#### SCIENTIFIC PROGRAM

Dr. Guy Caldwell introduced Dr. J. R. Brown, of St. Louis, who gave a very instructive talk and demonstration by lantern slides of the indications, technic and results of the thick skin grafts as used in the Blair Clinic, St. Louis.

The discussion was opened by Dr. Brown, of Shreveport.

T. M. Oxford, M. D., Sec'y.

### CLAIBORNE PARISH MEDICAL SOCIETY QUARTERLY MEETING

The Quarterly Meeting of the Claiborne Parish Medical Society was held at the City Hall in Haynesville, La., Tuesday night, March 10, 1936.

In the absence of Dr. F. Palmer, the president, the meeting was called to order by Dr. J. E. Batchelor, Vice-President. Minutes of the last meeting were read and approved. Dr. M. D. Hargrove, Counselor for the Fourth Medical District, made his official visit.

Dr. George Wolff of Shreveport read a paper on

"Convulsions in Children." This paper was then discussed by Dr. George Wolff and Dr. M. J. Rivenbark.

Dr. W. H. Browning read a paper on Allergic Manifestations. This paper was discussed by Drs. C. O. Wolff, M. J. Rivenbark and J. A. Wilkinson.

A letter was read from general manager F. A. Richards of the Tri-State Medical Journal asking that the Tri-State Medical Journal be made the official organ of the Claiborne Parish Medical Society. On a motion made by Dr. C. O. Wolff and seconded by Dr. M. J. Rivenbark that this journal be made the official organ was duly carried.

The visiting Drs. M. D. Hargrove, George Wolff, W. H. Browning and J. A. Wilkinson, all of Shreveport, were entertained at the Haynesville Hospital by Drs. Wolff and Rivenbark for dinner preceding the meeting.

Dr. H. R. Marlatt,  
Secretary-Treasurer.

#### NATIONAL TUBERCULOSIS ASSOCIATION THIRTY-SECOND ANNUAL MEETING

From April 22 through 25 will be the annual meeting of this organization in New Orleans. The preliminary program shows that on Wednesday night will be an open general meeting, the main address of which will be on the campaign against tuberculosis in Mexico, by Dr. Alarcon of Mexico City. It is expected that the Governor of Louisiana and the Mayor of New Orleans will give short talks. The four sections have arranged a most interesting series of papers. In the pathologic section, beginning 9:30 Thursday morning, five papers will be read by such men as Neiman, Woolpert, Vorwald and Kahn and others. Friday afternoon the section will continue when presentations will be made by a group which contains such names as Long, McPhedran and Wallace.

The clinical section will meet Thursday afternoon at 2:00 and it will be especially interesting to those engaged in the management of the tuberculous patient. Friday morning this section will meet again to hear six more papers.

The sociologic section meets Thursday afternoon at 2:00 with a symposium on the epidemiology of tuberculosis in youth.

In the administrative section the Thursday morning presentations will be on tuberculosis and economic security. On Friday, April 24 at 2:00 the subject will be putting our knowledge of tuberculosis to work, through the physician, through the schools and colleges, through the Tuberculosis Association and through the public agencies. On Saturday, April 25 at 9 a. m. there will be a joint symposium of tuberculosis among different peoples. In the symposium racial aspects of tuber-

culosis in Mexico, tuberculosis in Porto Rico, tuberculosis in negroes in the United States, will be presented and discussed.

In addition to these formal presentations, round table discussions are scheduled for two of the evenings at which the attendants are at liberty to bring up subjects for informal discussion and are free to participate in the general talk.

An attractive list of entertainment has been provided for the visitors who may not be interested in more than a minimal amount of the scientific work. There is thus combined pleasure and scientific business. The program is such that it should interest not only the clinician and the pathologist but those who are engaged in the social aspects of tuberculosis and in the various administrative problems that have to do with this important disease.

#### POPULAR BELIEFS AND SUPERSTITIONS ABOUT THE EYES

Under this heading the National Society for the Prevention of Blindness has published a pamphlet, publication No. 184, by Dr. Charles A. Bahn, President of the Louisiana Society for the Prevention of Blindness. This brochure contains many of the data that were in a paper of a similar title, however the present pamphlet has been altered considerably in many ways and is by no means the same work. Those interested in diseases of the eye and more particularly in prevention of blindness, will find this pamphlet, of some 19 pages, interesting and instructive. It will be especially interesting to the lay individual who likewise is interested in the problems that have to do with loss of sight.

#### NEWS ITEMS

A twelve months' Residence-ship in Allergy is available in the offices of Doctors Vaughan and Graham in Richmond, Virginia, for properly qualified young physicians. This will be a semi-annual appointment, the first appointment to be made in the very near future. Completion of an internship, either rotating or in Internal Medicine in a nationally recognized teaching hospital is a prerequisite.

Inquiries or applications should be made to Dr. Warren T. Vaughan, 201 West Franklin Street, Richmond, Va.

The American Association on Mental Deficiency composed of some 500 educators, psychologists, and psychiatrists is holding its sixtieth annual meeting at the Hotel Jefferson, St. Louis, Mo., on May 1, 2, 3 and 4. The Friday sessions will be devoted to General and Sociological aspects of mental deficiency; the Saturday sessions to Psychological

and Educational topics with special stress on Educational Disabilities. The Monday sessions will be given over to Research Activities, Medical Aspects and Administrative Problems in mental deficiency.

#### EARLY AND ADEQUATE CARE REDUCES THE RISKS OF MOTHERHOOD

Mother's Day has taken on added significance during these past few years because of the movement to bring to the attention of the Nation the needless waste of life of mothers in childbirth and to develop better maternity care.

A special effort is being launched for the sixth time this year through the Maternity Center Association with the keynote: Early and adequate care reduces the risks of motherhood: Father plays a leading role.

Experts tell us that over half of our maternal mortality of 15,000 a year could be prevented. In 8,000 homes last year mothers died who did not need to die. They were homemakers of 8,000 families in many of which were children.

It is needless to point out the social consequences of these deaths. Broken homes with their attendant problems help to fill the delinquency courts, to bring family strife and disaster to many young lives.

The crime of it is that although we know enough to prevent these deaths, they are not being prevented. The general death rate never was lower. Diphtheria and tuberculosis are on their way out as public health problems. We know enough to reduce maternal mortality as much as tuberculosis has been reduced during the past quarter of a century. But the death rate among mothers has remained nearly stationary since we have had statistics in the United States.

It is also interesting to note that maternal deaths last year were nearly half as numerous as automobile fatalities about which the Nation was so thoroughly aroused. There were 15,000 known maternal deaths compared with 36,400 automobile deaths. It also does not redound to our credit that the maternal mortality rate in the United States is one of the highest in the world. While this statement has been questioned from time to time because of the different methods of classification of deaths in various countries, the United States Children's Bureau in a recent study\* of the

subject declared that "No matter what method of procedure is used, the United States retains an exceedingly high rate as compared with other countries."

Do not let another Mother's Day pass without taking the first step in your community toward making maternity safe.

The Maternity Center Association, 1 East 57th Street, New York, upon request will gladly supply suggestions for the conduct of special Mother's Day educational efforts in local communities.

#### INFECTIOUS DISEASES IN LOUISIANA

Dr. J. A. O'Hara, Epidemiologist for the State of Louisiana, has furnished us with the weekly morbidity reports for the State of Louisiana, which contain the following summarized information: For the eighth week of the year, ending February 22, the following diseases were reported in double figures: 70 cases of measles, 64 of pneumonia, 34 of gonorrhea, 29 of syphilis, 28 of pulmonary tuberculosis, 24 of influenza, 18 of whooping cough, 15 of scarlet fever, 14 of diphtheria, and 11 of cancer. Three cases of smallpox were reported this week and 5 of cerebrospinal meningitis. One case of tularemia was listed from Iberia Parish and 1 case of undulant fever from Ascension Parish. For the next week, ending February 29, there was a decided jump in pneumonia, 90 cases being reported, probably an evidence of the cold weather which approximated this date. There were listed also 68 cases of syphilis, 78 of influenza, 51 of measles, 30 of pulmonary tuberculosis, 25 of gonorrhea, 19 of scarlet fever, 18 each of chickenpox and cancer. Of the rarer diseases, 3 cases of smallpox were reported this week, 3 of epidemic cerebrospinal meningitis, 4 of tularemia and 1 of undulant fever. The tenth week of the year, which ended March 7, was characterized by a very marked increase in the number of cases of influenza, 141 being reported this week. The pneumonia cases dropped to 53 but there were 86 of syphilis and 50 of whooping cough. Measles also was rather active as 70 cases appeared on Dr. O'Hara's report. Other diseases listed included 30 cases of pulmonary tuberculosis, 26 each of chickenpox and gonorrhea, 18 of diphtheria, 17 of scarlet fever, 16 each of malaria and cancer. Two cases of smallpox, both from Rapides Parish, were reported. One case of tularemia was reported from Orleans Parish. Trachoma appeared for the first time in some years on the weekly morbidity report, 1 case being reported from Caldwell Parish. Influenza was still rampant throughout the State, according to the report for the week ending March 14, as there were 111 cases listed. Pneumonia also was taking its toll as indicated by 71 cases

\*Comparability of Maternal Mortality Rates in the United States and Certain Foreign Countries, 1935, Publication 229.



recorded. There were listed also 68 cases of measles, 39 of pulmonary tuberculosis, 30 of whooping cough, 23 of chickenpox, 20 of malaria, 18 of syphilis, 17 of cancer, 16 of diphtheria and 14 of scarlet fever. There were 7 cases of smallpox reported this week, 6 of which came from Terrebonne Parish and 1 from St. James Parish. Two patients were found to have tularemia, 1 from E. Feliciana Parish and 1 from Jefferson Davis Parish.

#### HEALTH OF NEW ORLEANS

The Department of Commerce, Bureau of Census reports that for the week ending February 15 there were 178 deaths in the city; 107 white and 71 colored. The death rates for the three groups respectively were, 19.3, 16.4, 26.6. During this week 19 infants under one year of age died making the infant mortality rate 110. For the week ending February 22 there was a marked increase in the number of deaths, there being 199 with a death rate of 21.6, divided 118 white, rate 18.0 and 81 colored, rate 30.4. The infant mortality rate this week was 105. The death rate showed a further increase for the week ending February 29. The rate for the white group was 19.0 and for the negro 29.6. The infant mortality rate was 110. There was some drop in the death rate for the week ending March 7, 187 deaths being responsible for the rate of 20.3. As usual the negro rate, 28.1 was much higher than that of the white, 17.1. There were 112 white deaths and 75 negro. The infant mortality rate was 145; the negro infant mortality rate obtaining the remarkable high figure of 212.

#### A SAD ANNOUNCEMENT

It is with deep regret that the medical profession of the State have learned of the death of two distinguished New Orleans physicians, Dr. Charles L. Chassaignac and Dr. C. Jeff Miller, both of whom were truly great doctors. Dr. Chassaignac died at the age of 74 after a long active career. Dr. Miller was 62 years old and in the height of his fame and professional activity.\*

\*The death of these two distinguished New Orleans doctors took place after the Journal had gone to press. In the next number of the Journal it will be possible to publish more completely the activities and careers of these two men.

#### WOMAN'S AUXILIARY Louisiana State Medical Society

President—Mrs. Hermann B. Gessner, New Orleans

President-Elect—Mrs. James Byron Vaughn, Monroe

1st. Vice-President—Mrs. Samuel B. Kreeger, Lake Charles

2nd. Vice-President—Mrs. L. E. Shirley, Jennings  
3rd. Vice-President—Mrs. D. T. Milam, Monroe  
4th. Vice-President—Mrs. Harry R. Marlatt, Homer

Treasurer—Mrs. Jos. E. Heard, Shreveport  
Recording Secretary—Mrs. James W. Warren, New Orleans

Corresponding Secretary—Mrs. H. Vernon Sims, New Orleans

Parliamentarian—Mrs. C. E. Rew, Shreveport.

To the Auxiliary members of Louisiana:  
Dear Friends:

I hope you will read the excellent report of Mrs. T. H. Watkins and her committees. After reading it, I am sure you will agree with me that they have done a fine piece of work and that we can look forward to the meeting in Lake Charles as affording a splendid opportunity for us to meet together, have a wonderful time, form closer ties of friendship and carry away with us an enthusiasm which will do much for the greater success of the auxiliary in our state.

Looking forward to meeting you in Lake Charles, I am,

Sincerely,

Jessie H. Gessner,  
(Mrs. Hermann B. Gessner) President

The foregoing greeting from Mrs. Gessner exemplifies what awaits the visitor to Lake Charles for the State Meeting April 27-29. The ladies of the Lake Charles auxiliary have planned a very splendid program of both work and play—with enough time to be devoted to the seriousness of business, and plenty of time for amusement and fun. Our appreciation to the hostess auxiliary can be shown by a large attendance, so to those of our members who can go, don't miss this very lovely program that has been arranged. All good wishes to Lake Charles for a record-breaking meeting!

The Annual Meeting Headquarters and meetings of the Auxiliary to the Louisiana State Medical Society, Majestic Hotel

Registration Desk: Lobby, first floor.

Mrs. Stakely Hatchette, General Chairman

Chairmen of sub-committees

Registration—Mrs. Robert P. Howell, Jr.

Tickets and Program—Mrs. Louis Hebert

Automobiles—Mrs. H. B. White

Publicity—Mrs. G. C. McKinney

Exhibits—Mrs. W. P. Bordelon

Luncheons—Mrs. J. D. Tuten

Flowers—Mrs. Walter Moss

Tea—Mrs. Olin Moss

Barbecue Picnic—Mrs. T. H. Watkins

General Entertainment Committee

Mrs. R. G. Holcombe  
Mrs. George Kreeger  
Mrs. J. G. Martin  
Mrs. Louis Kushner  
Mrs. Ben Goldsmith  
Mrs. E. L. Clement  
Mrs. J. A. Crawford  
Mrs. D. S. Perkins  
Mrs. Robert Marshall

Mrs. C. V. Hatchette  
Mrs. B. N. Sewell  
Mrs. J. E. Sorrells  
Mrs. W. G. Fisher  
Mrs. T. C. Moody  
Mrs. I. M. Lamansky  
Mrs. F. D. Edwards  
Mrs. W. A. K. Seale

the hands of the A. M. A. no later than April 11. Please make four (4) copies of each report, and make every effort to comply with the wish of Mrs. Gessner. Your co-operation will be greatly appreciated. Mrs. Gessner's address is No. 119 Audubon Boulevard, New Orleans, La.

The meeting of the Woman's Auxiliary to the American Medical Association will be held in Kansas City, Mo., May 11-14—with headquarters in Hotel Baltimore. A large attendance is anticipated, so make note of the dates and make your plans now to attend.

Mrs. George D. Feldner, Chairman  
Press and Publicity

Monday, April 27, 1936

8:00 p. m.—Open Meeting.

Tuesday, April 28, 1936

9:00 a. m.—Pre-Convention Executive Board meeting, Majestic Hotel, second floor parlor, Mrs. H. B. Gessner, President of Auxiliary to Louisiana State Medical Society, presiding.

1:00 p. m.—Auxiliary luncheon at Majestic Hotel, tickets 75c.

3:30 to 5:30 p. m. Tea at home of Mrs. Matilda Gray—Doctors are also invited.

8:00 p. m.—Open meeting and President's reception

Wednesday, April 29, 1936

9:00 a. m.—General Session of Auxiliary, Mrs. H. B. Gessner President, presiding. Second floor parlor, Majestic Hotel.

Invocation: Rev. G. B. Hines

Welcome Address: Mrs. S. George Kreeger

Response to Address of Welcome: Mrs. James Byron Vaughan, President-Elect, Monroe.

Reading of Minutes.

Reports: State Officers; State Committees; Parish Auxiliaries; Special Committees.

Report of Woman's Auxiliary to American Medical Association

Report of Woman's Auxiliary to Southern Medical Association

Recommendations of Executive Board

New Business

Report of Nominating Committee

Introduction of New Officers

Reading of Minutes

Announcements by new president, Mrs. James Byron Vaughan.

Adjournment.

1:00 p. m.—Luncheon Majestic Hotel.

3:00 p. m.—Post-Convention Executive Board Meeting, Mrs. James Byron Vaughn, President of Auxiliary to Louisiana State Medical Society, presiding. Second floor, Majestic Hotel.

5:00 to 9:00 p. m.—Barbecue picnic for doctors and wives, Country Club, Prien Lake—Supper 5 to 7—Dancing 7 to 9.

# ATTENTION AUXILIARY PRESIDENTS AND CHAIRMEN OF COMMITTEES!!!!

Our State President, Mrs. Hermann B. Gessner has requested that all annual reports be sent in to her by April 6. These reports must be in

## CADDO PARISH

The March meeting of the Woman's Auxiliary to the Shreveport Medical Society met in the home of Mrs. L. T. Baker, Dixie, La. Mrs. Baker has always been a very active member of this auxiliary but due to the twenty mile drive, she has hesitated to invite the auxiliary. Her home is charming and the arrangement of jonquils and narcissi and flowering quince throughout the reception rooms was very pleasing. Splendid reports were given by the chairmen of the standing committees. The Christmas Seal Sale which sponsors the work at the Preventorium was most enthusiastically received. This lovely party was enjoyed to the fullest.

Mrs. Johnson R. Anderson,  
Publicity Chairman

## ORLEANS PARISH

The Woman's Auxiliary to the Orleans Parish Medical Society had the honor of being hostess at their March meeting to the wives of doctors attending the Southeastern Surgical Congress which recently met in New Orleans. A delightful talk on "Romantic New Orleans" was given by Mr. Meigs O. Frost, and a group of negro spirituals was sung by the Dillard University Octette.

During the business meeting, upon the suggestion of Mrs. Gessner, the assembly stood in honor of Dr. Rudolph Matas in significance of the honor conferred upon him at the meeting of the Southeastern Surgical Congress. Dr. Matas was made an honorary member of the Academy of Medicine and Science of Cuba and also a member of the Com-mandery of Carlos Finlay.

Mrs. Jules Myron Davidson, Chairman of Arrangements for the "Doctor's Day" Party to be held on March 30, reports that plans for this gala affair have all been completed, and if we are to judge from the enthusiasm displayed by our members, this leap year party will "go over" by "leaps and bounds."

Mrs. Ralph J. Christman,  
Publicity Chairman

## BOOK REVIEWS

*Bibliography of the Poem Syphilis Sive Morbus Gallicus*: By Girolamo Fracastoro of Verona; compiled by Leona Baumgartner & John F. Fulton. New Haven. Yale University Press 1935. pp. 157. Price, \$5.00.

Fracastoro's immortal poem first appeared in 1530. The authors of this comprehensive bibliography have traced one hundred editions, which comprise translations into six languages. In Italian there are fifteen independent versions; in English seven. They point out the strong influence of the poem and explain that in order adequately to estimate the influence of a work that has received such a wide recognition thorough bibliographical analysis must be applied. Every edition and more especially every translation teems with interest. Pertinent questions present themselves. Who was the printer? What sort of a fellow was the translator? Why was the translation undertaken? For what public was it intended? The authors answer many such questions. They speculate on the circumstances leading to the appearance of four English translations published between 1928 and 1935.

Their method of analysis is a combination of methods employed by Fulton in "A Bibliography of the Honourable Robert Boyle" and the Oxford Bibliographical Society in their Proceedings and Papers. Wherever possible they attempted to use contemporary spelling.

Bibliophiles and students of medical history will cherish this scholarly work not so much for cataloging and classifying the various editions but for the precious commentary notes which vest each studied edition with individuality, value and charm.

Nahum Tate, Poet Laureate of England wrote the first English edition in 1686. A free translation in iambic pentameter, it was widely acclaimed for its force and beauty. Dryden re-published it on four occasions in his miscellany. In 1911, the first American edition was published in St. Louis. The translator was Solomon Claiborne Martin who was graduated from Tulane University in 1865. By all odds the best English translation is the recent one by Dr. William van Wyck, famed Baltimore linguist and renaissance scholar. He called it The Sinister Shepard. It is distinguished by the fact that he adhered closely to the original text and produced a rhythm-perfect, stirring poem.

MAURICE SULLIVAN, M. D.

*Aphasia, A Clinical and Psychological Study*: By Theodore Weisenburg, M. D., and Katharine E. McBride, Ph. D. New York, 1935. pp. 601. Price, \$5.00.

This study of aphasia was undertaken in 1929,

with the assistance of a grant from the Commonwealth Fund, by Dr. Theodore Weisenburg, Professor of Neurology, Graduate School of Medicine, University of Pennsylvania, and Editor-in-Chief of the Archives of Neurology and Psychiatry. Dr. Weisenburg had for many years been interested in the subject of aphasia and devoted practically his entire attention to this study during the last years of his life. The completed manuscript was submitted for publication only a few weeks prior to Dr. Weisenburg's death.

The problem of aphasia is extremely intricate and a very much involved question. To evaluate properly even the simplest problems in aphasia requires a very broad knowledge of the anatomy and physiology of the areas of the brain involved in speech disturbance. For research in the problem or for anyone who wishes to know what has been advanced in explanation of aphasia, this book will prove a source of much value.

C. S. HOLBROOK, M. D.

*Fasciae of the Human Body and Their Relations to the Organs They Envelop*: By Edward Singer, M. D., New York. The Williams and Wilkins Co., 1935. pp. 105. Price, \$3.00.

The importance of fascias is well recognized by the surgeon but they have been surprisingly neglected in the textbooks and in the teaching of anatomy. The importance of fascias in the fundamental plan of the body structure and, therefore, their importance in the teaching and study of anatomy has not been generally appreciated. For this reason it is gratifying to see even an admittedly incomplete presentation of the subject.

Singer's work presents the fascias of the trunk particularly well and that of the extremities in a fairly adequate manner, especially from the standpoint of illustrations. In the neck region his descriptions do not agree with the findings of this reviewer in some respects but they do have distinct merit.

The fact brought out by the author in the preface to his work, that proper demonstration of the fascias is impossible by ordinary methods of dissection is worthy of special comment. The placing of the emphasis on compartments of which fascias form the walls is probably not sufficiently stressed. These compartments can be thoroughly studied and their limitations accurately determined by the simple expedient of filling them with air under pressure. This device is easily made available in the student laboratory and should be a part of the equipment of every dissecting room. It seems likely that Singer's findings might have been somewhat modified had this method of study



been utilized in addition to his method of removing the organs and preserving the fascias.

It is to be hoped that this little volume will serve as a stimulus to further work on this subject. If so, it will lead to utilization of much of the time, now devoted to intricate and all too soon forgotten detail, for the study of fascial compartments. Such an approach would greatly simplify the study of gross anatomy and provide the practitioner of medicine with a fundamental knowledge of anatomical relationships which he could hope to retain and use in the practice of medicine and surgery.

B. I. BURNS, M. D.

*Diseases of the Chest:* By J. Arthur Myers, M. D.; ed. by Morris Fishbein, M. D. New York. National Medical Book Co. Inc., 1935. pp. 385. Price, \$3.00.

The tremendous acquisition to our knowledge of pulmonary diseases in recent years necessitated the publication of a book which would at once be of much informative value and at the same time bring up the subject matter to the present moment and so make the reader acquainted with the newest and most reliable facts in current periodicals. It is the reviewer's opinion that Myers has most admirably and adequately done us this service. The book is divided into three major portions. The first two deal with Pulmonary Tuberculosis and the third with Non-tuberculous Diseases of the Chest. In Part I the first infection type is dealt with and in Part 2 the Reinfection type is discussed.

It is hardly necessary to dilate upon the fact that Myers today is accepted as one of the authorities in the study of tuberculosis. The sure manner of the master is obvious in the lucid and trenchant manner in which his material is handled. The clarity and simplicity of his style make the reading matter a pleasure and repeatedly, facts are so tellingly expressed as to make them readily comprehensible to all. Newer methods are especially considered and the growing importance of the tuberculin tests; the bronchoscopic examination; the roentgen ray; and the surgical procedures are all discussed and their importance in the diagnosis and treatment of tuberculous and non-tuberculous diseases are stressed. The only regret that one has in reading the book is that space required too much of what is essential to be meagerly considered.

I. L. ROBBINS, M. D.

*Yearbook of General Medicine*, 1935: Ed. by George F. Dick, M. D. and others. Chicago. Year Book Publishers, 1935. pp. 848. Price, \$2.25.

This publication is encyclopedic in its scope. Each branch of medicine has been edited by one

eminent in his field. The result is that the articles for the year 1935 that have been abstracted are of a superior order. This in itself would be enough to give the volume unstinted praise. But added to this are the brief but excellent editorials that the editors permit themselves. In addition here is a fine index and the book is both sizeable and handy. Finally the price is so reasonable that the volume should be added as a valuable aid to the library of necessary everyday reference that the physician needs. It is truly a masterpiece.

I. L. ROBBINS, M. D.

*John Whitridge Williams; Academic Aspects and Bibliography:* By J. Morris Slemmons. Baltimore. Johns Hopkins Press, 1935. pp. 107. Price, \$1.50.

This small volume represents, in a slightly modified form, the presidential address delivered to the Pacific Coast Society of Obstetrics and Gynecology by Dr. Slemmons. A short foreword by John C. French which, purportedly, is an estimate of Dr. Williams as a member of the faculty, mentions only the fact that he contributed generously to the library.

The book,—what there is of it,—is of much interest but limits its sketch of Dr. Williams' life chiefly to that portion of it when he was professor of obstetrics at Hopkins. It is curious to note that the pages which contain only a list of the titles of Dr. Williams' contributions to medical journals number one half of the pages devoted to his life.

Certainly it is fitting that the memory of America's foremost obstetrician should be honored and revered; but this little volume, in comparison to the greatness of the man, seems an ironical gesture. This is no criticism of the author whose brief address, encompassing as much of the man's life as could be contained in the brief space allotted to an address before a medical society, is well written and interesting. It is a criticism of a university which is apparently content with a slight farewell nod to one of its greatest geniuses.

Medical biographies form one of the most interesting and inspiring sections of medical literature. When one considers the number of real volumes which have been written of the lives and works of the great men of medicine,—men whose place is no higher than that of Dr. Williams,—and holds in contrast this offering in memory of a great life it becomes, what it is, a reprint,—bound and sold, instead of gratuitously given.

E. PERRY THOMAS, M. D.

*Obstetrics for the General Practitioner:* By J. P. Greenhill, B. S., M. D., F. A. C. S.; edited by Morris Fishbein, M. D. New York. National Medical Book Co., Inc. 1935. pp. 305. Price, \$3.00.

A medium sized volume "Obstetrics For The

General Practitioner," fills the aim of the author admirably. It reads well, hence is not a compendium. The simplicity of presentation of present day ideas and practices is given concisely. There is little to criticize except some of the illustrations. The emphasis on conservative practice recommends it.

GEORGE A. MAYER, M. D.

*The Cerebrospinal Fluid and its Relation to the Blood: A Physiological and Clinical Study:* By Solomon Katzenelbogen, M. D. Baltimore. The Johns Hopkins Press, 1935. pp. 463. Price, \$5.00.

Realizing that the literature on cerebrospinal fluid and its relation to blood has assumed gigantic proportions, the author has made an attempt to correlate the available data "as a basis for orientation and research." In this task, he has succeeded admirably for, while the book is not intended primarily as a text, it is a veritable mine of information, rich in pertinent data. The difficulty a contributor experiences in an impartial discussion of controversial problems in his field is solved by the author's finesse in avoiding the Scylla of dogmatism and the Charybdis of irresolution.

Throughout the twenty chapters of the book, one experiences the satisfaction of an authoritative and unbiased presentation of important contributions. The first three chapters concern themselves with the origin, mode of formation, and circulation of the cerebrospinal fluid. Ten chapters are devoted to the concentration and distribution ratios of various blood constituents between cerebrospinal fluid and blood in health and disease. The discussion considers the physiological and pathological significance of the data, including the practical consideration of their diagnostic value. The remaining seven chapters cover a variety of topics, including immunity processes in blood and cerebrospinal fluid, tests and alteration of "barrier function," pressure relationships, and the passage of arsenic and bismuth into the cerebrospinal fluid during chemotherapy with various compounds of these elements. Most of the chapters are closed by a short summary (a few chapters have, in addition, a comment) which correlates the presented factual knowledge, giving the reader a composite picture of theoretical and practical interest. The book closes with an extensive bibliography and an entirely adequate subject and author index.

There is little doubt but that this work is a valuable contribution to the literature. It should prove of moment, not only as an important reference book, but also as a stimulating source of numerous research problems.

SAMUEL B. NADLER, M. D.

*Diagnosis in Joint Disease:* By Nathaniel Allison, M. D., F. A. C. S. and Ralph K. Ghormley, M. D. New York. William Wood & Co., 1931. pp. 196. Illus. Price, \$4.00.

This beautiful atlas, comprising diagnostic methods in a number of the commoner arthritides, is the result of observations by the authors of 289 cases of joint disease.

Their sole object is an effort to establish more careful investigation in the various forms of arthritis, which, therefore, should result in more accurate diagnoses, and a more correct classification of joint conditions.

Following a most meticulous course of history taking, physical examination, laboratory investigation, and biopsy, with microscopical studies, each diagnosis is arrived at in the way of a logical conclusion.

A complete, brief survey of the historical background of each group of joint conditions, with studies in anatomy, physiology, pathology and biochemistry of the structures and joint fluid in the various diseases under discussion, is found at the beginning of each chapter. The chapter on tuberculosis of joints is especially interesting in the excellence of the cases included, the final diagnosis in several instances, apparently, having been made by study of tissue removed from the suspected joints.

It is interesting to note that a fairly common condition which must be differentiated from tuberculous arthritis is lacking in this volume; namely, osteo-chondritis juvenilis deformans.

The latter portion of the book is devoted to the proliferative and degenerative arthritides, and although much has been shown in the way of microscopical investigation, apparently very little, so far, has been done from the clinical standpoint to relieve the disabilities caused by these two conditions, or even to prevent their occurrence.

This volume, though interesting, contains nothing new, even in the way of classification, and, in the opinion of the reviewer, the remarkable amount of investigation done in order to establish the diagnosis in each case is the one commendable feature.

Photomicrographs of pathological tissue sections are carefully selected, and are beautifully reproduced.

DUDLEY M. STEWART, M. D.

*The Parathyroids in Health and in Disease:* By David H. Shelling, M. D. St. Louis. C. V. Mosby, 1935. pp. 335. Price, \$5.00.

Gley discovered the parathyroid glands in 1891 and studied the effects of extirpation in a number of animals. In the same year, von Recklinghausen described the lesions of the bones in osteitis fibrosa cystica, a condition which later became known as von Recklinghausen's disease. Unfor-

unately, the condition of the parathyroids was not noted by von Recklinghausen. To Askanazy, in 1904, belongs the credit of recognizing an enlarged parathyroid in the necropsy of a case of von Recklinghausen's disease, which led to description of other cases in which this association was found. The brilliant discovery of Mandl of Vienna, in 1925, that of finding the clinical symptoms enhanced by homotransplantation of parathyroid gland into a case of osteitis fibrosa cystica, led to his curing a case of the disease by searching for and removing a parathyroid adenoma. This completed the conception of the syndrome of hyperparathyroidism, removing von Recklinghausen's disease from the realm of neoplasms and placing it among the metabolic diseases due to derangement of internal secretion, at the same time throwing a new, bright light of interest on the parathyroid gland so that numerous articles indicating a mass of clinical and experimental investigation have been published on the subject. The author has digested this massive literature and places it before the reader, correlated and evaluated, so that the monograph may be said to be a true and full exposition of the present extent of our knowledge concerning the parathyroid glands and their function. The chapter on tetany is no less detailed than that on hyperparathyroidism and experimental evidence relative to the physiology and the relation of the parathyroids to vitamin D are discussed in detail. The author has obviously made an exhaustive study of the fundamentals of the subject and the book is recommended from that standpoint.

Very little space, perhaps too little, has been devoted to the technical surgical aspect, because surgical extirpation is the natural termination of hyperparathyroidism.

HOWARD R. MAHORNER, M. D.

*Immunology:* By Noble Pierce Sherwood, Ph. D., M. D., St. Louis. The C. V. Mosby Company, 1935. Illus. pp. 608. Price, \$600.

Sherwood has presented the fundamentals of immunology in what might be termed an introduction to the subject. Designed primarily for medical students, the text deals with the fundamental concepts of immunologic problems. One readily sees that it supplements, and must be supplemented by, collateral application and discussion of practical aspects of immunology, which are largely omitted.

One is happy to note that, unlike many text books, the author's views do not distort the evidence given for and against theoretical considerations—a sound attitude in a field in which theory plays a dominant role in interpretation and understanding. This is particularly to be noted in the discussion of tuberculosis and syphilis.

The inclusion of such recent immunologic ad-

vances as the clinical applications of PPD and the Frei test are to be commended. However, the relationship of the heterophile agglutinins to infectious mononucleosis is not considered.

Another commendable feature is the inclusion at the end of each chapter of adequate references.

WILLIAM A. SODEMAN, M. D.

*Clinical Miscellany*, vol. 2: 1935. The Mary Imogene Bassett Hospital, Cooperstown, N. Y. Springfield, Ill. Charles C. Thomas, 1935. pp. 218.

The first volume was reviewed in this Journal some months ago. The second is a worthy successor. The reviewer again wishes to call attention to the fact that this splendid contribution of case presentations emanates from the small village of Cooperstown, N. Y. and demonstrates convincingly and conclusively that the modern man in the country with the necessary modern tools of his profession is in every way the peer of his intellectual medical townsman.

I. L. ROBBINS, M. D.

*Medical Man and the Witch During the Renaissance*. By Gregory Zilboorg, M. D. Baltimore, The Johns Hopkins Press, 1935. pp. 215. Price, \$2.50.

This book consists of a group of three lectures presented by the author as the Hideyo Noguchi lectures at the Johns Hopkins University. It is an excursus into one of the most fascinating chapters on the history of psychiatry. The first lecture deals with physiological and psychological aspects of the *Malleus Maleficarum* by the Dominican monks. Johann Sprenger and Heinrich Kraemer and published in the years between 1487 and 1489. This infamous book was the textbook of the Inquisition and it gave official sanction to the horrible superstition of witchcraft, which was held the universal belief alike by the literate and illiterate of that century. The second deals with medicine and the witch in the sixteenth century, and in it the author convincingly shows that the witch and the devil "fulfilled an emotional and not an intellectual need of the age". Several interesting reformers of a lesser order are discussed. The final lecture concerns itself with Johann Weyer, the Founder of Modern Psychiatry and his famous book "De Praestigiis Daemonum, etc." It was completed in 1562. It is the greatest work in a dark and dismal age that preceded the spiritual rebirth of mankind and elevated the things of the mind to the status of a science. It was a real antidote to the first mentioned book and although its ideas were accepted as all great innovations, very slowly and haltingly, it yet was one of the great powers that finally shattered the horrible specter of medieval superstition,—witchcraft.

I. L. ROBBINS, M. D.



*Recent Advances in Medicine: Clinical, Laboratory, Therapeutic:* By G. E. Beaumont, M. A., D. M. (Oxon.), F. R. C. P., D. P. H. (Lond.) and E. C. Dodds, M. V. O., D. Sc., PhD., M. D., F. R. C. P. 8th Ed. Philadelphia, P. Blakiston's Son & Co., Inc., 1936. Illus. pp. 450. Price \$5.00.

One may be somewhat misled by the title of this book, especially since it is an eighth edition. "Recent advances" incorporate not only the additions to our knowledge in the last two to five years, and advances since the last edition, but include such routine procedures as the heat and acid test for urinary protein, the usual technics for blood chemistry and basal metabolism, and other advances of the modern era of medicine.

The new edition is a revision of the seventh edition of 1934. Advances in endocrinology, especially in pituitary secretions, anti-hormones, thymic extracts and chlorides in Addison's disease are included. The diagnostic use of iodine in hyperthyroidism is presented. Therapeutic advances in heart disease, both in the use of digitalis preparations and the use of thyroidectomy, are given. An evaluation of gold salts in the treatment of tuberculosis is made.

The conclusions on the relationship of the flavins to vitamin B<sub>2</sub> are somewhat premature, especially in the light of recent investigations. The electrocardiography given follows closely the work of Sir Thomas Lewis. One wonders, with the wide acceptance given the newer concepts of bundle branch block and ventricular ectopic beat localization in the United States, that at least mention is not made of these views.

While the book is unique in its scope both as to time and material, aside from the personal evalua-

tion of certain laboratory and therapeutic procedures, even the moderately well read physician can expect little from it.

WILLIAM A. SODEMAN, M. D.

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#### PUBLICATIONS RECEIVED

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The Soul of the Surgeon—Dr. Rudolph Matas.

Charles C. Thomas, Springfield: The Specificity of Serological Reactions, by Karl Landsteiner, M. D.

William Wood and Company, Baltimore: A Textbook of Roentgenology, by Bede J. Michael Harrison, M. B., Ch. M., D. M. R. E., (Cantab) F. A. C. R.

W. B. Saunders Company, Philadelphia: A Textbook of Surgery by American Authors, edited by Frederick Christopher, B. S., M. D., F. A. C. S.

Lea and Febiger, Philadelphia: Dental Infection and Systemic Disease, by Russell L. Haden, M. A., M. D.

The MacMillan Company, New York: The True Physician by Wingate M. Johnson, M. D.

The Johns Hopkins Press, Baltimore: The Biochemistry of The Eye, by Arlington C. Krause, M. A., Ph. D., M. D., F. A. I. C.

J. B. Lippincott Company, Philadelphia: International Clinics, edited by Louis Hamman, M. D.

The C. V. Mosby Company, St. Louis: Synopsis of Clinical Laboratory Methods by W. E. Bray, B. A., M. D. Abortion Spontaneous and Induced Medical and Social Aspects, by Frederick J. Tausig, M. D., F. A. C. S. Medical Mycology, by Carroll William Dodge, Ph. D.

# New Orleans Medical

and

# Surgical Journal

Vol. 88

MAY, 1936

No. 11

## WHAT SHALL WE DO TO BE SAVED?

### PRESIDENTIAL ADDRESS\*

HIRAM W. KOSTMAYER, M. D.  
NEW ORLEANS

It is said that over 2000 years ago "Greece maintained physicians in some of the large cities through a general tax". Since that time at more or less frequent intervals attempts have been made to put the practice of medicine under government control—to treat it as a creature of government, physicians to be paid salaries and the public to be furnished medical aid at the expense of the government. This was done in Germany as early as 1818, and in other countries since then.

In 1932 great impetus was added to this movement in this country by the majority report of the Committee on the Costs of Medical Care. The lay press all over the country took this report as the basis of attack on the quality and distribution of medical service and its cost, and now the subject is frequently and formally debated in high-school and college forensic societies. Surely all this makes it strongly probable that something is wrong with the quality of medical service, its distribution, its cost, or all three, for there is no such agitation for change in the clerical profession, or the engineering profession, or the legal profession, nor is there any widespread dissatisfaction with the cost of automobiles and radio sets, nor with their distribution to the public. Yet the cry is loud and ever louder that something must be done to change the quality and distribution of medical service. Why the agitation?

In the first place, it is only a little over a

quarter of a century ago that medical schools granted diplomas to registrants who had "read" medicine for two years. It is true that out of these came some of the foremost thinkers of the profession, men who have blazed the trail for the rest to follow; but a great many of these men moved out into sparsely settled communities, did their utmost for their fellows, it is true, but stopped their own professional progress exactly at the point where they received their diplomas. The country's population grew rapidly and with it demand for physicians. Medical schools conducted for profit turned out ill-chosen and inadequately prepared men, lured by the desire for financial reward or the prestige conveyed by the title "Doctor". Many of both of these classes have never read a medical journal, never attended a medical meeting, and never gone to a medical center for post-graduate review or study.

Then came aseptic surgery. For a while only men who had served long apprenticeships, usually non-productive financially, did the major surgery. Their fees were large to compensate for the years of poor earnings, and justly so, but surgery reached out further and further to relieve suffering and save life; familiarity, as usual, bred contempt, and the graduate of today became the surgeon, or operator, of tomorrow. These novices demanded and collected the same fees as the masters, at the same time competing with their fellows in general work; nor does the public have any certain method of distinguishing the one from the other. Now just as the race was on to get into the medical profession the depression struck. In a little while it was discovered that as a class physicians held up better than any group as to income from business and the rush became a mad scramble. For the sessions

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1934-35 and 1935-36 the number of applicants rejected for medical courses would have more than filled again as many first-year classes as were available. What is the result? In 1934 there were graduated in this country over 5000 more physicians than were needed for normal replacements, each one licensed to practice any and all branches of medicine. Yet there are communities inadequately supplied with physicians because of the gravitation of the recent graduate to the larger places where facilities exist for him to do the surgery he can cull from his own general practice. Does this not in part answer the question "Why the agitation?"

Despite the fact that the smaller communities have places of amusement, repair plants for radio sets and automobiles, it may be admitted that they cannot afford the technicians, chemists, and specialists and equipment necessary for the complex practice of medicine of today. Surely, with good roads and the transportation of today these are always available in nearby centers, except in the case of a few unusually remote places.

Does any or all of this mean "socialized medicine?" No, assuredly not.

The public does not want "socialized medicine". It has been tried unsuccessfully in other countries. It is un-American. The relation of physician to the patient who elects him above all others available has an indefinable charm to the patient as well as to the doctor. It begets a feeling of mutual interest and trust which works for the best for the patient, and ennobles the practice for the physician. The great majority of the American people want no change, and if they are cajoled into voting "socialized medicine" on themselves will rue it unto the day of reversion to the old order.

Americans enjoy spending money. Give them an excellent product and they will buy it greedily and pay well for it, unless it be overproduced. Make every physician a well-trained practitioner, with integrity enough to do only what he is qualified to do, and there will be no "problem". In the absence of this "Utopia" safeguard the public against the untrained and unscrupulous among us and we need not fear "socialized medicine" in any of its forms. First,

last and all the time, let us resist any effort of outside agencies to dictate our methods of practice.

It is not supposed for a moment that all the foregoing statements will be accepted. On the contrary, most of this subject matter is extremely controversial. It will at once be pointed out that this country, except in maternal and fetal mortality, stands in the front ranks in most medical endeavors. American surgery is second to none and in hygiene and sanitation, public health and preventive medicine this country is foremost. The startlingly reduced incidence of tuberculosis, typhoid, and malaria, and the reduction in infant mortality are examples. These but offer proof positive that American medicine has been fundamentally sound. But the profession must not rest on its laurels. Surely if overproduction and poor distribution of merchandise proved disastrous to industry, overproduction and faulty distribution of the most important commodity in American life, medical service, will indeed be a calamity compared to which the former will fade into innocuous insignificance. Unnecessary calls, illegal and unnecessary operations will multiply in direct ratio to the oversupply of physicians in each community.

What then, shall we do to be saved? First, last, and always resist with all our might the efforts of others to conduct our affairs. Consider seriously all plans for betterment of our service, adopt what is helpful and reject the rest, but always do our own administering. Make ourselves unassailable by working to the end that attendance for at least a month each five years at a medical center be a requisite for continued membership in organized medicine; choose candidates for the pre-medical course with scrupulous care as to citizenship background as well as scholastic accomplishments and cull these registrants carefully at the end of each session through the first medical year; reduce the number of medical matriculants to approximately the number needed for replacements; take operative surgery out of the curriculum and put it in an extra year for those carefully chosen for fitness and willingness to serve another five years apprenticeship; certify specialists ourselves to forestall the govern-



ment in this all-important function and make known to the public those whom the profession deems qualified in various branches. Briefly, then, the formula is this: Give the American public well-trained physicians prevented by Boards of their fellows from doing the things they have not qualified to do and the threat of state or socialized medicine will promptly meet the death to which the character of the average Americans has already foredoomed it. Let government and well-meaning but misguided lay organizations concern themselves with eradicating cults and quacks—the medical profession is not only willing but is eager to improve its service and is the only body competent to do so.

### PATHOLOGY OF SICKLE CELL ANEMIA\*

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Sickle cell anemia is a familial, hereditary disease confined almost entirely to the negro race. There is a possibility that it exists in the Caucasian race<sup>1, 2, 3, 4, 5</sup>. The original observation by Herrick<sup>6</sup> in 1910 and the papers by Washburn<sup>30</sup>, Cook and Meyer<sup>7</sup> and Mason<sup>8</sup> furnished the basis for the differentiation of the disease which was established as a clinical entity by the early reports of Sydenstricker and others<sup>9, 11, 14</sup>. Since this time a fairly large literature has accumulated and the clinical manifestations as well as distinctive pathological features have become well established.

One of the most interesting features is the peculiar and distinctive poikilocytosis observed in the circulating blood of an active case, in vitro and postmortem. The majority of observers have considered this of basic importance and have interpreted it as evidence of a constitutional abnormality of the hematopoietic system which is transmitted equally by both sexes as a dominant character according to the Mendelian law. Most of those thus stigmatized show nothing more than a sickle cell trait which can be demonstrated by sealing a cover

slip preparation of fresh blood with vaseline. It is estimated that about eight per cent<sup>10</sup> of the negro population show this phenomenon. In this group, a few, likely to show other stigmata such as physical or mental underdevelopment, develop an active hemolytic anemia. This may be present at birth or the period of onset may be during infancy, childhood, adolescence or early maturity<sup>12</sup>. Graham<sup>12</sup> states that the onset of active symptoms probably indicates the point at which an excessive rate of hemolysis can no longer be compensated through some overactivity of the hematopoietic system or through some other physiological check or balance. Such an individual is poorly equipped to withstand the vicissitudes of life and becomes an easy mark for infectious diseases. The majority of them have died before thirty years of age.

In many respects sickle cell anemia resembles congenital hemolytic jaundice. Its occurrence only in the negro race, absence of increased fragility of the erythrocytes in hypotonic salt solution, characteristic pathological anatomy and the distinctive poikilocytosis constitute noteworthy differences.

Experimental observations on the behavior of the blood in these patients have furnished many interesting facts<sup>12, 13, 14, 15, 16, 17</sup> but little that illuminates us on the nature of the process in vivo. That susceptible cells are constitutionally abnormal appears to be established. The full scope of the abnormality is not definitely known and the mechanism by which one of the visible evidences of this abnormality (sickling) is produced is not agreed upon by the separate investigators<sup>12, 15, 16</sup>.

The pathological changes observed in all active cases of sickle cell anemia are so similar and constant that it may be said that it is an entity from a standpoint of pathology. The relevant pathology observed in five active cases studied postmortem and three spleens removed surgically during the past three years will serve to verify the distinctive pathological picture in the disease. It is not our purpose to add anything fundamentally new on the pathologic anatomy of the disease but rather to report in a summary fashion observations on additional material.

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Age	Sex	Intercurrent Disease
6 mos.	Male	Acute peritonitis following splenectomy
7 yrs.	Female	None
21 yrs.	Male	Subacute and chronic glomerulonephritis
22 yrs.	Male	Subacute and chronic glomerulonephritis. Pneumonia.
29 yrs.	Male	Osseous and pulmonary tuberculosis.

TABLE 1—CASES WITH POSTMORTEM EXAMINATION

Of the cases coming to necropsy, it will be observed from Table I that all died before thirty years of age. With one exception, intercurrent disease or diseases were important in the cause of death. Two had subacute and chronic glomerulonephritis with considerable hypertrophy of the heart. One of these, aged 22 years, who died during a latent reaction from a blood transfusion, showed lobar pneumonia. A twenty-nine year old male died of osseous and pulmonary tuberculosis. A six months old male died of acute peritonitis following partial evisceration through the splenectomy wound on the fourth postoperative day. A seven year old female showed no evidence of active intercurrent disease.

The pathology of the spleen is characteristic. It consists of a series of progressive changes characterized in the beginning by congestive enlargement and in the advanced stages by fibrous atrophy with iron and calcium incrustation. Clinical and postmortem observations would indicate that some degree of splenic enlargement is probably always present in the earlier phases of the disease. Large spleens are more likely to be encountered in infancy or early childhood<sup>10</sup>. The average weight of the spleen in eight reported cases under five years was 240 grams<sup>10</sup>. A spleen weighing 621 grams was removed from a boy four years old<sup>17</sup>. The average weight of twenty-five spleens from patients over 5 years of age was 70 grams<sup>10</sup>. The largest spleen recorded, weighing 960 grams, was removed at autopsy from an adult female who died of shock following cesarean section<sup>18</sup>. Marked atrophy of the spleen has been reported in young children<sup>14</sup>. Diggs and Ching<sup>10</sup> could find no remnant of the spleen at autopsy on a fifty-one year old male. Corrigan and Schiller<sup>20</sup> re-

ported a spleen weighing .87 grams from a twenty-three year old female. Two spleens of this series showed extreme atrophy as will be observed from Table II.

Age	Sex	Spleen		Liver
		Weight	Measurement	Weight
6 Mos.	Male	157 gms.	11x7x5 cm.	320 gms.
1 Yr.	Female	80 gms.	10x5.5x3 cm.	
2 Yrs.	Female	292 gms.	15x10x6.5 cm.	
7 Yrs.	Female	50 gms.	7x5.5x3 cm.	1100 gms.
21 Yrs.	Male	1 gm.	3.5x1x.5 cm.	2250 gms.
22 Yrs.	Male	2.6 gms.	5x1x1.4 cm.	2480 gms.
23 Yrs.	Male	75 gms.	9x5x4 cm.	
29 Yrs.	Male	250 gms.	12x9x6.5 cm.	1800 gms.

TABLE II—WEIGHTS OF LIVERS AND SPLEENS AND MEASUREMENTS OF SPLEENS

Three spleens (ages 5 months, 1 year and 2 years) of this series were representative of the early stage of the disease. They were enlarged, dark purple in color, free from adhesions and the capsular surfaces were coarsely pebbled due to overdistension with blood. The sectioned surfaces were dark red in color, firm and the Malpighian bodies were minute, widely spaced and absent or obscured for large areas. The trabeculae were inconspicuous. Microscopically, the Malpighian bodies were found to be small, often distorted and showed intense congestion in the marginal zones which was continuous with similar engorgement of



FIGURE 1

Section of spleen showing fibrosis of the marginal zone of the Malpighian body and lymphoid sheath surrounding a central artery. x150.

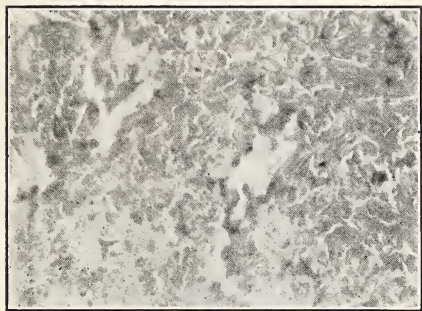


FIGURE 2

Section of spleen showing marked congestion of pulp cords, compression of venous sinuses and sickled and elongate erythrocytes.  $\times 600$ .

the pulp. Only in one case (age 1 year) was marginal congestion of the Malpighian bodies of greater intensity than that of the intermediate portions of the adjacent pulp and this was not constantly so. Early fibrosis was seen in the peripheral zones of many of the Malpighian bodies and a few were completely obliterated by scars which were either dense or of looser arrangement containing a few erythrocytes, the majority of which showed the characteristic deformity. The central arteries frequently showed obstructive endarteritis, partial or complete, due both to proliferation of the lining cells and thickening of the subendothelial portion of the intima. The endothelial cells lining many of the smaller arteries appeared to be swollen. Thrombosis was not found. The pulp cords were markedly thick-

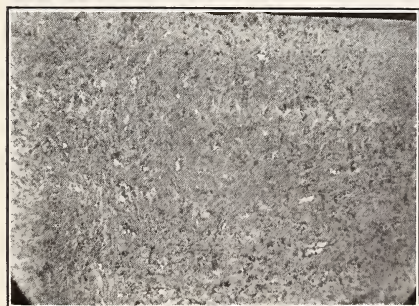


FIGURE 3

Section of spleen showing small, empty venous sinuses, thickened pulp cords and non-iron containing pigment.  $\times 200$ .

ened due to engorgement of the spaces with crescentic and elongate erythrocytes. The sinuses in the greater part of every section examined were compressed, often completely obliterated and largely empty. In the subcapsular zone of one of the specimens there were areas in which the sinuses were widely dilated and filled with closely agglutinated and characteristically deformed erythrocytes. Large mononuclears, an occasional eosinophile and a few nucleated red blood cells were found in some of the sinuses. Areas both in the margins of the Malpighian bodies and in the intermediate zones of the pulp cords gave the appearance of the reticulum having been disrupted with consequent pooling of blood. Phagocytosis of the erythrocytes was rare and found only in the free mononuclears. Fine and coarse granules and masses of dark brown iron free pigment, both free and within phagocytic cells, were abundant.

Three of the spleens (ages 7, 23 and 29 years) were characteristic of those showing more advanced changes. The ages of the patients as well as the sizes of the organs differed widely. Only one can be considered smaller than normal. Active and healed tuberculosis were probably of importance in deter-

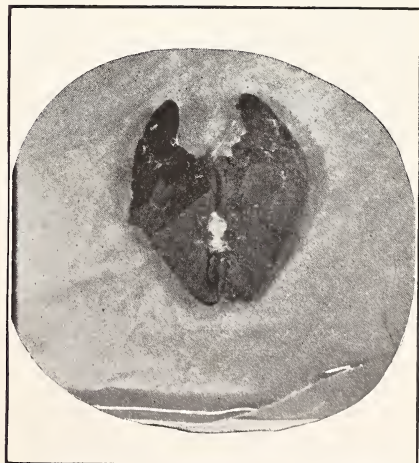


FIGURE 4

Spleen from a 23-year-old male. The oval, circumscribed nodules are probably hyperplastic regenerative areas of splenic tissue.



mining the size of the largest. Notwithstanding these differences, there were many features in common. Macroscopically, the thickened, slate colored, wrinkled capsules showed rust brown plaques and evidence of dense adhesions. Two of them presented a nodular outline due to oval elevations of varying sizes over which the capsules were smooth. The cut surfaces were firm and the red brown pulp was partitioned off by thickened trabeculae and fibrous bands which were quite prominent

usually oval in shape, which showed a varying amount of organization at the peripheries and to a less extent throughout them. The Malpighian bodies for the most part showed no trace of lymphoid cells. A few of them were dense scars about the narrowed central arteries. The majority of them, however, were seen as closely aggregated, oval areas, without structural details, filled with greenish yellow masses of iron-containing pigment either with or without calcium. Throughout the smaller areas of hemorrhage there was an abundance of iron-free and iron-containing pigment, both free and in phagocytic cells. The small and medium size arteries showed marked thickening of their walls and thrombosis was common. Calcium was deposited in the medial layer of some of the larger arteries. Giant cells were rather numerous in many of the heavily pigmented and scarred areas and some of them had formed about masses of pigment.

The marginal zones of the oval, dark red, circumscribed areas noted in the gross had the appearance of rather normal looking pulp with the pulp cells quite numerous. The venous sinuses for the same distribution were normal in size and contained large mononuclears and in a few instances marrow cells. Towards the centers of these areas the pulp cords were markedly engorged with erythrocytes with an apparent diminution of the pulp cells. The venous sinuses were compressed and largely empty. Malpighian bodies were not found and

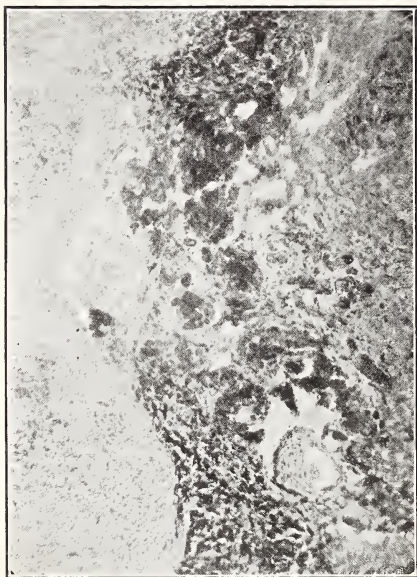


FIGURE 5

Section of spleen showing an area of hemorrhage on the left and thickened trabeculae, closely aggregated Malpighian bodies and scars containing calcium and iron-containing pigment centrally.  $\times 200$ .

in one. Of particular interest were the oval, dark red, slightly bulging circumscribed nodules occurring in all three but numerous in one. The nodularity noted in the gross was caused by these areas situated in the peripheral zones of the organs. Microscopically, the capsules and trabeculae were markedly thickened and contained a large amount of calcium and iron-containing pigment. Irregular scars together with the closely placed trabeculae separated numerous small areas of hemorrhage, us-

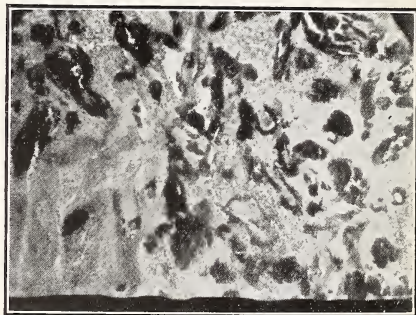


FIGURE 6

Section of spleen. The pulp is replaced by fibrous tissue. The thickened trabeculae, scars and remains of Malpighian bodies contain a large amount of calcium and iron-containing pigment.  $\times 200$ .

only occasionally a medium size artery was seen. There was an abundance of brown pigment both free and within phagocytic cells throughout these areas.

The two spleens showing extreme atrophy (ages 21 and 22 years) are characteristic of those showing the most advanced changes. These were shriveled, elongated, triangular masses that were free from adhesions. The capsules were rust brown in color and coarsely wrinkled, giving a corrugated appearance. The sectioned surfaces were of a rust brown color, firm and fibrous. Microscopically, the capsules and trabeculae were markedly thickened and contained a large amount of calcium and iron-containing pigment. A few small, oval, structureless areas filled with iron-containing pigment and calcium represented the remains of the Malpighian bodies. The pulp was replaced by either dense hyaline scars or connective tissue of looser arrangement containing a few lymphocytes, plasma cells and an occasional eosinophile. The small arteries were largely obliterated. Occasionally a central artery showing marked endarteritis was identified. The larger arteries, including the splenic, showed arteriosclerosis.

Both the superficial and deep lymph nodes were constantly found enlarged. In the 7 year old female they were quite large, discrete nodes of the mesentery measuring as much as 3 cm. in diameter. Microscopic findings common to all were marked congestion of the capillaries, a varying number of histiocytes in the medullary cords and sinuses, diffuse fine scarring of the reticulum which varied in intensity and a varying amount of non-iron-containing pigment largely within phagocytic cells in vessels, medullary cords and sinuses. In the older cases the trabeculae and capsules were thickened. Eosinophiles and plasma cells were usually more numerous than normal. The lymphoid follicles did not appear to be any more numerous than one would expect to find in the respective age groups. Proliferation and swelling of the endothelial cells lining vessels were not constant findings. Erythrophagocytosis was rare and not constantly found.

The weights of the livers are recorded in Table II. It will be observed that some de-

gree of enlargement was found in all of them. This has been the usual postmortem and clinical finding in active cases. The hepatic cells, often poorly defined, were more granular than normal and showed fatty change of varying intensity. The liver cords in some appeared to be actually reduced in thickness and the sinusoids widened. These latter contained erythrocytes, many of which were sickled, and in some places were packed with them. Large phagocytic cells containing many characteristically deformed erythrocytes were usually abundant in the sinusoids. Nucleated red cells were quite numerous in the sinusoids of two. Both iron-free and iron-containing pigment was present in the Kupffer's cells. A varying amount of iron-free pigment was found in the hepatic cells. The periportal connective tissue infiltrated abundantly with lymphocytes and a few eosinophiles was quite marked in three cases (ages 7, 21 and 29 years). In the others, this was not greater than one usually finds in routine autopsy material of similar age groups. In one (aged 22 years) a few, small, soft black calculi were found in the gallbladder.

The findings in the kidneys, specifically related to the disease, consisted of marked congestion of the tubular and glomerular capillaries with sickled cells and a deposit of both iron-free and iron-containing pigment in the convoluted tubules and, in some instances, in the glomeruli.

The bone marrow in two cases (ages 5 months and 29 years) was of a bright red color and probably softer in consistency than

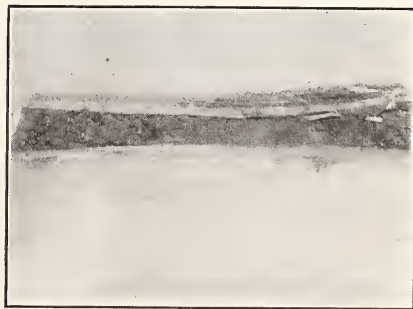


FIGURE 7

A portion of the tibia from a 22-year-old male showing marked hypertrophy of the marrow.

normal. In the others it was of a red or grayish red color and quite abundant, filling the enlarged medullary cavities of the long bones as firm masses. A thin marginal zone contained delicate bone trabeculae. Pale, yellowish scar-like areas were seen in the gross in all the solid marrows and in one (age 7 years) these were quite large, entire short segments of the marrow being involved. The capillaries of all of the specimens were engorged with elongate and sickled cells. Hemorrhage into the marrow stroma was inconstant. Large areas would show none while others, in many instances appearing to be related to overdistended sinusoidal capillaries, showed marked hemorrhage. Phagocytosis of erythrocytes was rare. A small amount of iron-containing pigment was present in the fixed tissue cells and in large mononuclears in the older patients. Minute scars and a varying amount of reticular fibrosis was found in all of the marrows. Infarctions occurred in three (ages 7, 21 and 22 years). The primitive and intermediate cells of the granulocytic series were usually more abundant than the megaloblasts and nucleated red cells. Rarely a nucleated sick cell was identified. The megakaryocytes were increased. Eosinophiles and lymphocytes were distributed throughout the sections.

The hearts regularly showed moderate enlargement and were twice the normal size in the two patients with nephritis. The myocardium was pale and soft and on microscopic examination fatty degeneration of varying degree was found. Scarring of the myocardium in three (21, 22 and 29 years) was considerable.

Except for engorgement of the capillaries with sickled cells and thrombosis of smaller vessels of one (age 22 years) the lungs presented no unusual features. Lobar pneumonia was found in one (age 22 years) and pulmonary tuberculosis in another (age 29 years).

#### COMMENT

The interpretation of the findings in the spleen in sick cell anemia is puzzling. The enlargement observed in the early phase appears to be due largely, if not altogether, to congestion. Malformations of the venous sinuses and

capillaries have been suggested as responsible factors but so far as I know details of actual findings of this nature have not been reported. Rich<sup>21</sup> considered pooling of blood about the Malpighian bodies, either completely or partially surrounding them, a characteristic splenic lesion and referred it to congenital imperfections of the ampullae of Thoma. Graham found the congestion immediately surrounding the Malpighian bodies of greater intensity than that in the intermediate portions of the pulp in most of his material. We have been particularly impressed by the marked engorgement of the pulp spaces with crescentic and elongate erythrocytes, compression of the sinuses and what appears to be rupture of the overdistended pulp spaces with consequent hemorrhage. However, in some of the sections including the peripheral zone of the organ, there were found just beneath the capsule dilated sinuses filled with closely agglutinated and characteristically deformed erythrocytes. Furthermore, it must be confessed that structural detail of the organ was completely obliterated in some areas by the abundant blood.

Mall<sup>2</sup> and more recently Robinson<sup>33</sup> have shown that the splenic circulation is an open one. The end capillaries or portions beyond the ellipsoids were found to expand into ampullations dilatations and fuse with the pulp. The blood then takes a devious course through the pulp spaces and finally enters the venous sinuses through stomas in their walls. The propulsive force of the circulation, once the blood has reached the pulp spaces and venous sinuses, resides in the musculo-elastic tissue of the capsule and trabeculae.

In view of the peculiar intermediary circulation of the spleen, it has occurred to us that the distinctive physical characteristics of the erythrocytes might offer some impediment to the circulation in the smallest capillaries and particularly in the pulp spaces. It would appear on a morphological basis that some of the hemorrhages observed in organs showing both early and more advanced changes are related to rupture of overdistended pulp spaces. There is some indirect evidence in support of such an hypothesis. The capillaries are always engorged, the pulp spaces are packed with char-



acteristically deformed cells that are interlocked and closely agglutinated and the venous sinuses for the most part are compressed or empty.

Atrophy associated with more advanced changes is due to diffuse fibrosis of the organ. Both the lymphadenoid and pulp portions appear to suffer equally. The underlying lesions appear mainly to be obstructive endarteritis, thrombosis of the smaller vessels and hemorrhage. Gross infarction was not observed in any of our material, although this has been a frequent finding in the reported cases. The changes observed in the smaller arteries suggest toxic injury<sup>24</sup>. Whether this results from ordinary toxic or infectious conditions in a constitutionally abnormal person, from an overburdened reticulo-endothelial system extremely active in phagocytosis or erythrocytes, or whether there is specific toxemia, is problematic.

Calcium and iron incrustation in the degree and distribution that it is found in the spleen in sickle cell anemia is unusual and probably specific for the disease. Bennett<sup>25</sup> reported a case as nodular atrophy of the spleen with calcium and iron incrustation and later recognized it as sickle cell anemia<sup>19</sup>. Goldberger's case<sup>26</sup> of nodular atrophy of the spleen with calcium and iron incrustation was a negro. In the study of the sections he remarked that the erythrocytes were elongate. Calcium deposit does not seem to have a specificity for small spleens and it has been found in various lesions of the spleen as well as other organs. Kaufman<sup>27</sup> found spleens weighing 19 and 10 grams, respectively, in two aged women in which the pulp had largely disappeared and the trabeculae and blood vessels had become correspondingly more prominent. In each instance a brown amorphous pigment was found but apparently not identified. Ehrlich<sup>28</sup> reported that elastic fibers in the neighborhood of scars or infarctions have a tendency to absorb iron. He believed that the deposit of iron preceded that of calcium and found them both present in elastic fibers and scars of splenic infarctions. Bennett concluded that iron was of primary importance in calcium deposition. Thus it would appear that the lesions of the spleen in this disease particularly favor the deposit of

iron and calcium, iron being of primary importance.

The oval, circumscribed, homogeneous appearing areas noted in the gross are peculiar. Graham<sup>24</sup> interpreted these as probably hyperplastic regenerative areas of splenic tissue, the so-called splenadenoma. The presence of definite pulp structure, the lack of Malpighian bodies and trabeculae and the absence of definite features of hemorrhage or fibrotic and pigimentary changes common to the remainder of the organ would appear to support this view.

Both the erythropoietic and granulopoietic tissues of the marrow are hyperactive. In the younger patients in this series the two appeared to be about equal, while in the older cases the granulopoietic tissue predominated. In all, however, evidence of overactivity of the erythropoietic tissue was apparent. Large infarcts were found in one and smaller necrotic areas interpreted as infarcts were found in two others. It is probably significant that scarring of any proportion or infarction occurred only in the solid marrows which completely filled the medullary cavity and eroded the medullary portion of the cortex. This suggests that spatial adaptation may be a factor in the causation of these lesions.

Phagocytosis of the erythrocytes, which is a prominent feature both postmortem and clinically, appears to be an attempt on the part of the reticulo-endothelial tissue to rid the blood of inherently abnormal red blood cells. It has been suggested that deformed erythrocytes may act as foreign bodies.<sup>29</sup> Just what part erythrophagocytosis plays in the production of the anemia is problematic.

#### SUMMARY

The relevant pathology of five cases of active sickle cell anemia studied postmortem and three spleens removed surgically are reported.

It is suggested that the distinctive physical characteristics of the erythrocytes in active sickle cell anemia offer impediment to the circulation in the pulp spaces of the spleen. Partial but sustained obstruction to the intermediary circulation on this basis would offer satisfactory explanation for the stage of congestive enlargement.

Rupture of overdistended pulp spaces appears to be one source of hemorrhage.

## BIBLIOGRAPHY

1. Stewart, W. B.: *Am. J. Dis. Child.* 34:72, 1927.
2. Archibald, R. G.: *Tr. Roy. Soc. Trop. Med. & Hyg.* 19:389, 1926.
3. Gastana, V.: *La Pediatria* 33:431, 1925.
4. Cooley, T. B. and Lee, Pearl: *Am. J. Dis. Child.* 38:103, 1929.
5. Rosenfeld, S. and Pincus, J. B.: *Am. J. Med. Sci.* 184:674, 1932.
6. Herrick, J. B.: *Arch. Int. Med.* 6:517, 1910.
7. Cook, J. E. and Meyer, J.: *Arch. Int. Med.* 16:644, 1915.
8. Mason, V. R.: *Jour. Am. Med. Assn.* 79:1318, 1922.
9. Sydenstricker, V. P., Mulherin, W. A. and Houseal, R. W.: *Am. J. Dis. Child.* 26:132, 1923.
10. Diggs, L. W. and Ching, R. E.: *Sou. Med. J.* 27:839, 1934.
11. Sydenstricker, V. P.: *Sou. Med. J.* 17:177, 1924.
12. Graham, G. S. and McCarthy, Sarah H.: *Sou. Med. J.* 23:508, 1930.
13. Cooley, T. B. and Lee, Pearl: *Am. J. Dis. Child.* 32:334, 1926.
14. Sydenstricker, V. P.: *Jour. Am. Med. Assn.* 83:12, 1924.
15. Josephs, H. W.: *Bull. Johns Hopkins Hospital* 40:77, 1927.
16. Hahn, E. V. and Gillespie, E. B.: *Arch. Int. Med.* 39:233, 1927.
17. Landon, J. F. and Lyman, A. V.: *Am. J. Med. Sci.* 178:229, 1929.
18. Lash, A. F.: *Am. J. Obst. & Gyn.* 27:79, 1934.
19. Bennett, G. A.: *Arch. Path.* 7:801, 1929.
20. Corrigan, J. C. and Schiller, I. W.: *New Eng. J. Med.* 210:410, 1934.
21. Rich, A. R.: *Bull. Johns Hopkins Hosp.* 43:398, 1928.
22. Mall, F. P.: *Bull. Johns Hopkins Hosp.* 9:219, 1898.
23. Robinson, W. L.: *Am. J. Path.* 2:341, 1926.
24. Graham, G. S.: *Arch. Int. Med.* 34:778, 1924.
25. Bennett, G. A.: *Arch. Path.* 7:71, 1929.
26. Goldberger, S. E.: *Proc. N. Y. Path. Soc.* 26:141, 1926.
27. Kaufman: *Spezielle Pathologische Anatomie*, ed. 3, Berlin & Leipzig, W. de Gruyter & Company, 1:184, 1928.
28. Ehrlich, S.: *Centralbl. f. allg. Path. u. path. Anat.* 17:177, 1906.
29. Anderson, W. W. and Ware, R. L.: *Am. J. Dis. Child.* 44:1055, 1932.
30. Washburn, R. E.: *Virginia Med.* 15:490, 1911.

## DISCUSSION

Dr. S. Chaille Jamison (New Orleans): I am going to have the temerity to answer this discussion, not because I am a pathologist, or with any pretense to being a pathologist, but because I have been interested in this disease for many years, and have published several accounts of various cases. As a matter of fact, we saw sickle cell anemia in Dr. Bass's laboratory before the disease had been described—at least about the same time. I brought a specimen from one of my wards at Charity Hospital to our laboratory and I had never seen these peculiar sickle cells before. Dr. Bass and Dr. Johns looked at it and Dr. Bass said "That is something out of the ordinary and you should report it." Well, I missed the chance and did not report it. Dr. Hauser and I did report a rather typical case years ago.

No man has done more work on sickle cell

anemia than Dr. Sydenstricker of the University of Georgia. Graham of Birmingham has done much in the South.

From the standpoint of the clinician, we have three types of sickle cell anemia: First, we have the true clinical sickle cell anemia, that is the anemia with definite clinical manifestations. These consist of ulcers, which simulate to a certain degree syphilitic ulcers. These patients are apt to have a peculiar granulation of the sclera. Dr. Hauser and I could not determine whether it was jaundice or not. This particular patient had a spleen no bigger than my thumb. I am very much interested in Dr. Mathews' hypothesis that in the first stages the spleen is enlarged, but as the disease progresses, the spleen becomes smaller. In the splenectomies done, it has been reported they proved of some benefit. I question that very much.

Next, we have the sickle cell anemia that you can recognize in no clinical way I know of. It has no manifestation that that of any ordinary anemia has. You pick this up when you examine the blood smear.

The third type, that described by Sydenstricker, is the potential type where no sickling comes up until a specimen of the blood is put in solution and let stand. He has been able to show that if the patient presents true sickle cell anemia, observation may not show it, but the blood will sickle if put aside in rather permanent specimens, but on ordinary examination of the blood no sickling would appear.

My observations extend over twenty-five years, and we perhaps saw several a year, though we were not so fortunate as Dr. Mathews in getting so many autopsies. My own experience with sickle cell anemia of the type where the patient presents no real clinical symptoms and with the potential type was that they are of more interest than importance. I have not been able to see that the fact they had sickle cell anemia, that any definite clinical manifestations could be attributed to it more than any other anemia. It is my idea that it is very questionable, in spite of the splendid pathological demonstration here today, to place sickle cell anemia in a definite entity as a disease. It strikes me sickle cell anemia is more of an anatomical peculiarity, due to certain racial and probably hereditary causes. There have been at least two cases I know of in white persons reported, but that was from the middle west, and in the northern part of the middle west and I was not at all certain that the ancestry of these patients was entirely free of a touch of the tar. Certainly, we have not seen sickle cell anemia in the south in any but negroes, and I feel that if I saw sickling, definite sickling in the blood of a white man, I would look for a nigger in the woodpile somewhere.

I have been enormously interested in this paper and I want to congratulate Dr. Mathews.

Just one last word—I wonder if he has neglected the possibility that the administration of iron might not be responsible for the appearance of iron in the various autopsies. These patients might have been treated with iron.

Dr. W. R. Mathews (In conclusion): In regard to Dr. Jamison's question concerning iron therapy, I am unable to say what medication these patients had before entering the hospital. I feel rather certain that they received little or no iron at Charity Hospital.

Like Dr. Jamison, I feel that there is no good basis for splenectomy in this disease as a curative procedure. It is conceivable that splenectomy during the stage of splenic enlargement might spare the patient whatever discomfort there is associated with infarction, which accident has been reported fairly frequently. Several years ago Sydenstricker pointed out that<sup>5</sup> the spleen appeared to suffer more than it offended. More recently Diggs has suggested that these patients will usually splenectomize themselves if let alone.

Dr. Jamison called attention to the potential cases, sicklelema, which constitute about 8 per cent of the negro population. Only a few of these develop an active anemia. The vast majority of them appear to be at no particular disadvantage from this peculiar property of their erythrocytes to sickle under appropriate conditions.

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## INTENSIVE RADIATION IN HYPERTHYROIDISM\*

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By the term hyperthyroidism we mean the condition or symptom complex observed in cases of true Parry's disease or exophthalmic goiter, toxic adenomas of the thyroid and others showing a high metabolic rate, accompanied with the characteristic nervous symptoms usually produced by excess thyroxine secretion.

By the term intensive radiation we mean, for the purposes of this communication, a large quantity of the type of radiation usually applied in the treatment of hyperthyroidism, the same quantity and type more frequently applied, or a form of radiation produced by the higher voltages and heavier filtration.

In calling attention, again, to the treatment

of hyperthyroidism by roentgen radiation, it is not my intention to revive the argument as to the relative merits of surgery and radiation in this condition. It would seem that a careful review of available literature on the subject would be convincing to any unbiased mind, that radiation commands most careful consideration in the plan of treatment for toxic thyroid cases. The analysis, made by Menville, of results in over ten thousand cases treated by radiation given by many operators over the country, settles this question very definitely.

The object of our presentation is to urge a more intensive type of radiation than usually applied, or a more intensive use of the type as generally used by radiologists. The argument advanced by those who advocate surgical removal as the only treatment, that the time consumed and lost by the use of roentgen ray therapy is a hazard to the patient, is the only argument against radiation which is rational and logical. To those who realize the damage thyrotoxic states have upon a heart, no further argument is needed to convince them that the toxicity should be relieved as promptly as possible, providing of course, more serious hazards are not introduced in the effort.

We are all agreed that the quickest method of relieving the patient of his toxic source is the removal of the greater portion of the thyroid gland. I think we are all agreed again, that if the toxemia can be controlled within a period of a few weeks the interests of the average patient are being properly cared for. This is evidenced in the practice of experienced surgeons who consume weeks in preparing their patients by rest and the use of iodine, or for months by ligation of the thyroid arteries or installment operations. Therefore, if we can accomplish control of the toxic state within six to twelve weeks or sooner, by radiation, the one argument against its use falls.

For the last twenty-five years or longer, hyperthyroidism has been treated by roentgen radiation. The technic has been varied only slightly—125 to 150 K. V. P. with divided dose and long intervals, three or four weeks, being the generally accepted plan. The results from various sources have been fairly uniform and on a par with the general average of surgery over the country. With

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this technic, it would seem that the toxic state is allowed to run unnecessarily long.

We have in our files today records of cases cured of their hyperthyroidism, but who are carrying crippled hearts. Some, of course, come with crippled hearts; some, we fear, could have been saved permanent myocardial changes had more intensive radiation doses been applied.

On reviewing the latest reports from those of wide experience in the treatment of toxic goiter by radiation, we find as stated, that their treatment intervals run from three to four weeks and the time consumed in treating an average case, four to six months or more. The opinion of surgical men seems to be that it is proper to relieve a patient of his source of toxicity, the thyroid gland, at one stroke. This being the case, it would appear there could be no reason for not relieving him by radiation as rapidly as possible, as the stimulating effect of radiation is rather a myth than a fact.

We have been treating toxic goitres for over twenty years by means of roentgen rays and have varied our technic over a very wide range. We have been convinced that there is little difference in the effect of roentgen rays in these cases, produced by radiation of high and low voltages. On the other hand, we have been convinced that there is a very decided difference in results when the patient is kept constantly under the effect of radiation or given intensive doses, as compared to the cases treated at long intervals and with low intensities.

According to the physicist, roentgen ray effects produced in living tissue fall away at the rate of 8 per cent per day. This means, if a maximum dose is given, 56 per cent may be added in seven days with no ill effect on the skin. In practice we have found this true and have evolved the plan of adding, each seven days, about 50 per cent of the full dose given at the beginning of the treatment. These doses may be continued over a period of five or six weeks, with safety. In cases living at inconvenient distances, K. V. of 200 C. P. is used at two to four week intervals.

Under either of these plans, we expect to see the toxicity yield rapidly and the patient

discharged in about one half the time consumed with long intervals and low intensities.

We routinely place our patients on hydrobromide of quinine, when very toxic, and never iodine.

In practically all cases that have come to us with recurrences following operation, and others showing marked resistance to treatment, we have found infected tonsils, teeth or other foci. Therefore, we are very particular in having these hindrances controlled from the first.

The following two cases are illustrative of results that may be expected:

Case 1. White female, aged 35 years. Her pulse, tremor, exophthalmos, thyroid enlargement, and weight are indicated in Chart No. 1. This patient became practically toxic free in about six weeks. The treatments were applied every seven days for five weeks and then every two weeks for three additional treatments, the patient being discharged in ten weeks. No metabolism rates were being taken at the time her treatment was given. After twelve years, she still has a crippled heart, though her general health is now good and no thyroid toxicity present. (See chart I).

1922 Feb. 1. Tram. Ex. O. Enl. Pst. Ind. Rad. Dose									
3-21	140	4+	2+	2+	85	?	235	4.0	
3-28	140	4+	2+	2+	85	?			
4-6	130	2+	2+	2+	88	?			
4-13	120	1+	2	1+	88	?			
4-20	100	1	2	1+	94	?			
5-4	100	1	1	1	96	?			
5-18	80	0	1	0	100	?			
6-8	80	0	0	0	104	?			
107 K.V. P-3 mm. al. F.									
R-L. Ant. Lat.									

(Chart I)

Case 2. White male, aged 25 years. The prominent symptoms in his case are noted in Chart No. II. His improvement was such after using intensive radiation, that only three applications were given. Seven weeks after beginning treatment, he was toxic free and remains well today. Metabolism tests were not regularly made, because of difficulty in controlling patient after he began to improve. (See chart II).

1934 Pal. Fam. Ex 0 Enl. Wt. Met. Rad. Med.									
426	130	4+	2+	2+	133	62	750	Quin	
512	100	3+	2+	2+	130	55	375	R	✓
530	120	2+	1+	1+	123	52	375	R	✓
6-11	104	1+	1+	1+	137	?	0	0	
6-9	96	0	+	+	146	?	0	0	
7-9	90	0	+	+	156	?	0	0	
8-10	76	0	+	0	153	-4	0	0	
9-13	80	0	+	0	163	?	0	0	
200 K.V.C.P. 4 m.C. R. & L. Ant. Lab.									

(Chart II)

## DISCUSSION

Dr. Leon J. Menville (New Orleans): Dr. Barrow has presented a most interesting subject for your consideration. He particularly stressed the point in regard to high voltage treatment in thyrotoxicosis. I do not believe there is any argument between radiologists as to whether moderate or high voltage is the best to use in treating goiter cases. We all agree that irradiation therapy is an effective means of treatment in such cases.

It might be well at this time to mention that irradiation is not a substitute for surgery, and vice versa, surgery is not a substitute for irradiation therapy in the treatment of toxic goiter, because of the fact that the good results obtained in surgery are also obtained by irradiation therapy, when it is applied by one who is familiar with the treatment. Both forms of treatment are at times disappointing. We should remember that success in medicine is obtained by the judgment and skill of the physician, and not by the media in which he works.

I have been interested in the use of irradiation therapy for the treatment of goiter patients for a long time. I am even more enthusiastic about it now than ever before. It may be of some interest for you to know that in a series of over 10,000 cases treated with irradiation therapy by radiologists of varying experiences in the United States and Canada, some treating as few as five cases, others as many as a thousand cases, the percentage of cure was as great as that of surgery without any mortality.

An interesting report has just been announced from the Roentgen Institute of Vienna, by J. Borak, Director of this Institute, to the effect that irradiation applied to the pituitary gland of women at the menopausal period, suffering with toxic goiter, have been relieved markedly. It has been the experience of many radiologists that women at or near the menopausal period with toxic goiter

in certain instances do not respond well to any form of treatment. Borak speaks of the interrelationship existing between the pituitary and the thyroid glands, and on this basis he reports a number of favorable results obtained on women patients with toxic goiter who had their pituitary gland irradiated. We have personally treated three such cases, but it is too early to say what the results are going to be.

There are certain types of goiter which irradiation therapy does not benefit, such as cystic goiter. Others are better benefited by surgery and still others by treatment by a competent internist. However, it should be remembered that a very large percentage of goiter cases are amenable to irradiation therapy, which Dr. Barrow has so well brought out.

Dr. Hans Schroeder, (New Orleans): I would like to ask the essayist how he reconciles his treatment of hyperthyroidism with the recent statement by Crile (J. A. M. A. 104:978, 1935) that he removed the symptoms of the disease by section of the sympathetic nerve to the adrenals.

Studies of hyperthyroidism seem to indicate that it is a disease of the lymphatic system. Nordmann (Virchows Arch. f. path. Anat. 267:158, 1928) found the lymph sinuses congested and narrow in uncomplicated cases, and believes it is a disease of the blood stream.

Viale (Arch. di fisiol. 25:422, 1927) demonstrated choline in lymph glands chemically. This, he believes, comes from the adrenals or is an intermediate metabolic product of lecithin, which again is regulated by way of the hormones of the adrenals.

In another paper Viale (Arch. di fisiol. 25:619, 1927) states that the adrenals are important not only in the lymphogenesis, but also in the composition of the lymph. In the lymph of animals without adrenals there is less glucose, diminution of cholesterine and choline, and slight modification of the lecithin.

This choline action of the lymphatics has been reported by others as well, among them are Biedl and Offer (Wien. klin. Wchnschr. 20:1530, 1907) who mention the Ehrmann reaction, in which the instillation of lymph into the eye hinders the mydriatic effect produced by adrenalin.

Wirth, (Biochem. Ztschr. 32:245, 1922) however, claims that the antagonism to adrenalin cannot be plainly stated, and that such antagonism is not general.

Dr. J. D. Young (Shreveport): This is out of my line, but I want to bring out one point that Dr. Barrow brought out in his paper that is rather important, I think. That is, in many cases of thyrotoxicosis you have other agents acting.

A short while ago a patient was referred to me with epidemic encephalitis. The patient improved

under treatment, and went from 91 pounds to 140 pounds. He came in one day and asked if he could go fishing the following day, and I told him he could. To my surprise, the next day he reappeared at the office with a marked enlargement of both lobes of the thyroid gland, which was not present previously.

This patient had had basal metabolic rates done on him on two or three different occasions prior to this, and they were minus. That day I referred him to Dr. Barrow, and the next morning the basal metabolic rate was done, and, if I am not mistaken, it was plus 95, a condition of acute thyroiditis.

Due to this patient's general condition, we decided to have Dr. Barrow treat him with the roentgen ray. The patient immediately began to improve, but the basal metabolic rate did not return to normal as rapidly as we felt it should, although the patient's tremor and pulse improved, and the marked enlargement of the thyroid disappeared. Dr. Barrow felt that perhaps there was some other etiological factor in this case, so the patient was referred back to me, and then again he was placed on intensive treatment for encephalitis, and after a period of about six weeks his basal metabolism returned to normal, the pulse was normal, and the patient made an uneventful recovery.

I just wanted to bring that fact to your attention, as Dr. Barrow stated in his paper that the case of thyrotoxicosis should be carefully examined and all types of infection removed when present, and when they do not respond to the radiation therapy look for something else perhaps as an exciting cause in these cases.

Dr. S. C. Barrow (Shreveport): Gentlemen, I think the voltage used in the cases is immaterial. I think you can do the same with a low voltage as you can with a high voltage. Where I have convenient access to the patient every week, I use the lower voltages. Where they live at a great distance and it is hard for them to come, I give them the intensive high voltage doses.

I did not refer to the treatment of any cases of thyroid disease except hyperthyroidism.

The Doctor asked me how I reconciled what I said to Dr. Crile. I cannot reconcile what I said with what Dr. Crile said because he does not agree with himself. Dr. Crile is not treating his goiters that way. He has treated twenty-eight of them, as I get the report, that way, and does not recommend that treatment. But he is still taking them out in the usual old way.

When we get off into the glandular field, we get lost pretty quickly. If I could treat my pelvic cases by treating the head, or treat my thyroid cases by treating the head, it would simplify matters a whole lot. But when we do that, we no doubt do something else. If he is going to operate

upon anything he had better operate on the thyroid gland. That is what he is doing now. That report you had is just experimental work. He does not put it out as a method to be followed.

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## RECENT DIAGNOSTIC AND THERAPEUTIC ADVANCES IN PERIPHERAL CIRCULATORY DISEASE\*

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NEW ORLEANS

There is today a growing conviction that peripheral vascular disease, which was formerly considered to be the concern of the surgeon only when its end result, gangrene, had come to pass, offers a wide and as yet an almost untouched field for the application of the principles of preventive medicine. Many times, of course, amputation is still the only resort, and nothing is gained by not facing that fact. The individual who is to be saved from mutilation or worse must be saved before and not after gangrene has set in. Amputation is all that is left when the degree of circulatory impairment outstrips by too wide a margin the development of an adequate collateral circulation, or when a virulent spreading infection gains a foothold in an extremity with a deficient vascular supply. Under such circumstances life must be set above limb, and radical treatment must be resorted to without hesitation or delay.

Before gangrene has set in, however, the situation is very different, and conservative measures are both desirable and possible. They are particularly applicable, as Mont Reid points out, to three groups of individuals, those who are living in complete ignorance of their disease, those who are aware of their disability but who are being treated on an incorrect diagnosis, and those whose disease is recognized and who by intelligent care can be tided over the crisis in which, in another day, amputation would have been the first and only thought.

Three main trends are noticeable in peripheral vascular disease, the first of which involves its

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proper classification. There are two main groups. The first includes diseases fundamentally organic in origin, such as arteriosclerotic and diabetic occlusions, and the second diseases fundamentally vasospastic in origin, such as Raynaud's disease and scleroderma. A third ill-defined group which, as Reid points out, is not yet correctly classified, includes such diseases as thrombo-angiitis obliterans, which partakes of the characteristics of both the organic and the vasospastic groups, and shows evidence of being inflammatory in origin. The importance of this new conception of peripheral vascular disease, with its more or less clearcut separation of the etiologic factors, will be apparent when the question of therapy is considered somewhat later in this paper.

The second notable advance in peripheral vascular disease has to do with diagnosis, chiefly the increasingly accurate use of the oscillometer and the demonstration of the state of the circulation by means of arteriography. Since the introduction of stabilized thorium dioxide (thorotrast, Heyden), there has been available for the latter purpose a painless and non-irritating agent, which we ourselves have employed for the last two years in something over 300 cases. We have devised and recently described a simple, one-person technic for its use, and in several previous communications we have pointed out its advantages. We have employed it, to date, in all types of peripheral circulatory disease, as well as in aneurysms, primary axillary vein thrombosis, arteriovenous fistulae, and extravascular tumors, finding it of value in all of these conditions, and without ill effects of any sort.

We agree with Allen and Camp, the pioneers in this country in the use of thorotrast, that arteriography is usually an adjunct procedure rather than an absolute diagnostic necessity. If the proper history is taken, the proper physical examination made, and the routine tests employed, there is no doubt that the experienced observer can reach a diagnosis by clinical inference in the majority of cases of peripheral vascular disease. On the other hand, it is possible by this method to secure minute details of the state of the vascular tree which no other method reveals. It is evident, therefore, that arteriography is of value

in the diagnosis of obscure cases of advanced disease, and particularly in the type of case upon which the modern surgeon places so much emphasis, the case in which the clinical signs are still vague and in which preventive measures can achieve their most brilliant results.

We have used this method routinely for determining the lowest limits of adequate circulation, and have found it, as we have recently pointed out, far more accurate than either the histamine or the salt solution test, though we have as yet had no opportunity to compare it with the oscillometric test. We are not inclined to attribute only to this method the decreased mortality which our service has recently been able to show after amputation for gangrene, for too many other factors play equally important or more important parts. The fact remains, however, that our mortality has markedly improved, and we think it is at least partly because, since we have used arteriography, we feel that we can amputate at a lower level with greater assurance of safety than ever before, and with a smaller percentage of recurrent gangrene.

We have also been able to show by arteriography that in a certain percentage of cases of gangrene of the lower extremities amputation at any level is a hopeless effort from the outset. The arterial changes in such cases can well be compared to the changes seen in the arteriosclerotic kidney, in which the degree of renal occlusion and the degree of impairment of renal function exactly parallel each other. An analogous condition exists in certain cases of senile arteriosclerosis of the extremities. There is a gradual obliteration of the arterial trunks, the collateral circulation is insufficient to compensate for it, and gangrene finally sets in. In some cases amputation, always at a high level, is practical. In others, as arteriography clearly shows, the degree of arterial occlusion is so great and the compensating collateral circulation is so inadequate that recurrence of the gangrene is inevitable, regardless of the level of amputation. In other words, a true state of inoperable gangrene exists, and the surgeon will have the support of visible evidence should he refuse operation, or the poor consolation of knowing, if he does resort to surgery, that he cannot blame himself unduly if the pa-

tient loses his life as well as his limb, since all the dice are loaded against him.

Arteriography does not differentiate between occlusion by spasm and occlusion by organic disease, unless, as has been our recent practice, an endeavor is made to overcome possible spasm. With the addition of this precaution, such a differentiation has proved to be perfectly practical, and we propose to follow this plan routinely in the future in any case in which spasm is evident or suspected.

The third trend in peripheral vascular disease is along the lines of therapy, and it begins in a very simple fashion, with the use of prophylactic measures which have long been employed in the care of diabetics, and which have proved applicable to all varieties of circulatory pathology. Scrupulous cleanliness, the avoidance of trauma, of infection, of extremes of temperature, and of positions inimical to the vascular supply, the proper care of the skin, the use of special exercises such as those devised by Buerger and Allen, and attention to the general health and hygiene, are all measures which can be carried out by the patient himself, and will be carried out if once the proper rapport is established between his physician and himself. The restriction of tobacco is also important, the harmful effects of which on the vascular supply of the extremities has recently been convincingly demonstrated by Mad-dock and Coller. Moreover, as Reid emphasizes, almost the first thing that a physician should do for his patient is to determine with him and for him the level of optimum circulation in the extremity, which is usually just above the heart level.

The application of heat in various forms, the administration of such drugs as histamine, theobromine, and certain of the choline derivatives, and the use of contrast baths are all of value in relieving pain and relaxing spasm. We have personally used, with excellent results in the relief of night pain, the simple method of reflex vasodilatation described by Gibbon and Landis, the immersion of the upper extremities in water at a temperature of 45° C. The relief of pain, we would emphasize, is one of the most important considerations in peripheral vascular disease, and many an amputation, particularly in Buerger's disease, has been

done because the physician failed to realize that fact. Samuels, who has recently reported 300 cases of this disease treated by conservative measures, with amputation in only one instance, believes that pain is never a reason for amputation, and accepts as an indication for such surgery only so complete a destruction of the extremity that a weight-bearing stump is unattainable.

The most important surgical advance in the therapy of circulatory disease of the extremities is the use of sympathectomy or ganglionectomy in those cases in which, as a result of careful classification, the factor of spasm can be clearly demonstrated. The results of these procedures correspond with astonishing accuracy with the results of the prognostic tests without which such operations should never be undertaken. These tests, some of which have a therapeutic value also, include the injection of foreign proteins, particularly typhoid vaccine, to produce hyperpyrexia; the use of spinal and general anesthesia; the method of Gibbon and Landis, already described, of immersing the forearms in hot water; or the Pickering and Coller test, which consists merely of wrapping the patient in blankets. The use of such measures, in conjunction with arteriography, will supply an even more definite prognosis for the neurologic surgery proposed, since it will supply visual evidence of what is happening within the blood vessels.

Sympathectomy is not indicated in any condition in which the factor of spasm is not clearly proved. Furthermore, its permanent and irreversible character must be comprehended, as Lehman has pointed out, as well as its possible effect on the individual's ability to meet future physiologic emergencies. As this author well puts it, we must avoid developing a race of individuals freed from their complaints but suffering from the results of their therapy.

In conclusion, we would mention the group of patients, in one sense the most important of all, who are subject to what may be termed recurrent attacks of vascular occlusion. Gradual occlusion of the arteries can be withstood in most cases, for the collateral circulation develops parallel with the pathologic process, but when abrupt occlusion occurs, the nourishment of the extremity is suddenly jeopardized. Such

occlusion constitutes an acute emergency and demands emergency measures for relief. If an embolus is the cause, as can now be positively determined by arteriography, embolectomy is justified, for loss of life or at least of limb is inevitable if less drastic measures are adopted. Most patients, however, can be carried through the emergency by other, less radical measures. These include absolute rest, the use of superheated air, hypodermoclysis with Ringer's solution, the intraduodenal administration of large amounts of hypertonic salt solution, the intravenous infusion of such agents as sodium citrate, and, in particular, the use of alternating positive and negative pressure by means of the Pavaex machine devised by Herrmann and Reid or the similar apparatus recently described by Landis and Gibbon.

How these measures are to be used, in what combinations and for what conditions, must be the decision of the individual physician after his study of the individual patient. The important thing to realize is that the new conception of peripheral vascular disease implies the consideration of the patient with this disease as an individual who can be spared much, if not all, of the disability and mutilation that formerly was inevitable in it. The brilliant results secured by the Cincinnati and Philadelphia groups, as well as by many others, are a challenge to all surgeons everywhere to duplicate what they have done, an achievement that is not impossible if the diagnostic and therapeutic advances we have outlined in this brief communication are consistently and properly employed.

#### BIBLIOGRAPHY

- Allen, E. A., and Camp, E. V.: Arteriography. *Jour. Am. Med. Assoc.* 104:618-624, 1935.
- Coller, F. A. and Maddock, W. G.: The function of peripheral vasoconstriction. *Ann. Surg.* 100:983-992, 1934.
- Herrmann, L. G. and Reid, M. R.: Conservative treatment of arteriosclerotic peripheral vascular diseases. *Ann. Surg.* 100:750-760, 1934.
- Landis, E. M. and Gibbon, J. H.: Effects of alternate suction and pressure on blood flow to lower extremities. *J. Clin. Invest.* 12:925-961, 1933.
- Landis, E. M., and Hitzrot, L. H.: Clinical value of alternate suction and pressure in treatment of advanced peripheral vascular disease. *Am. Jour. Med. Sc.* 189:305-325, 1935.
- Lehman, E. P.: The rationale of surgery of the sympathetic system. *Southern Med. Jour.* 26:1019-1026, 1933.
- Maddock, W. G. and Coller, F. A.: Peripheral vasoconstriction by tobacco and its relation to thrombo-angitis obliterans. *Ann. Surg.* 98:70-80, 1933.
- Reid, M. R.: The diagnosis and treatment of peripheral vascular diseases. *Am. Jour. Surg.* 24:11-35, 1934.
- Samuels, S. S.: Gangrene due to thrombo-angitis obliterans: further experiences with treatment. *Jour. Am. Med. Assoc.* 102:436-442, 1934.
- Veal, J. R. and McFetridge, E. M.: Arteriography in gangrene of the extremities by the use of Thorium Dioxide (stabilized). *Ann. Surg.* 101:766-775, 1935.
- Veal, J. R. and McFetridge, E. M.: Adequate circulation in the extremities. *Jour. Am. Med. Assoc.* 104:542-545, 1935.
- Veal, J. R. and McFetridge, E. M.: Technical considerations in arteriography of extremities with Thorotrast. *Am. J. Roent. and Radium Therapy.* 32:64-71, 1934.

#### DISCUSSION

Dr. Ambrose H. Storck (New Orleans): I will limit my discussion to the ischemic crises that occur in peripheral arteries, emphasizing the importance of early recognition and vigorous application of one or more of the several methods of treatment that are now available.

Unfortunately, many patients do not seek medical attention until a vascular crisis occurs, and it may be necessary to institute treatment immediately. The immersion of the arms in warm water for the purpose of inducing reflex dilatation of the vessels in the lower extremity and the application of dry heat, alternate elevation and lowering of the extremity above and below the level of the heart, and the administration of large amounts of fluid are all methods that may be applied simultaneously or in succession when the patient is first seen. At times the early administration of such drugs as scopolamine, theobromine, or choline preparations may seem advisable and prove of some benefit. Besides those methods which require no special equipment, there are two other important methods of treatment which if applied early may provide tremendous benefit in preserving a limb in which an acute occlusion of a major blood vessel has occurred; i. e., the application of alternating positive and negative pressure by means of such an apparatus as the Pavaex designed by Herrman and Reid, or the injection of the appropriate sympathetic ganglia with alcohol. Unfortunately, the apparatus for furnishing alternating positive and negative pressure is not at present generally available.

The injection of the lumbar or cervicodorsal sympathetic ganglia can be done without delay almost anywhere, and all that is required is a spinal puncture needle, a syringe, alcohol, familiarity with the method, and facility in making the injections.

There has been much controversy in regard to the efficacy of interrupting the sympathetic outflow in obliterative vascular disease. It has been argued that the lack of satisfactory end-results, or the recurrence following sympathectomy or sympathetic block, makes such procedures almost-



worthless, but it is certain that early sympathetic injection or sympathetic resection will tide many patients over an ischemic crisis. Some of the poor results following procedures directed toward the sympathetic nervous system have unquestionably been the result of inadequate or improper execution of the methods.

Another type of procedure that I think deserves mention is the alcohol injection of peripheral mixed nerves, which has been employed in peripheral vascular obliterative diseases for the relief of pain. To begin with, in exposing the nerves, damage is often done to nearby main vessels, capillaries are destroyed, and, furthermore, the procedure deprives the patient of the protection afforded by sensation.

In cases of peripheral vascular disease in which it becomes obvious that amputation will be necessary, it is usually advisable to perform the amputation within a few hours, because of the danger of rapid development or progression of infection in an ischemic extremity.

Dr. Isidore Cohn (New Orleans): They say it is a difference of opinion which makes horse race betting.

For the last year it has been my privilege to have the opportunity to treat many cases of vascular diseases involving the extremities after the plan suggested by Herrmann and Reid, with the so-called Pavaex outfit. One of the interesting things I have observed is not the crisis, not the fact that the patients come late, but when they come fifty per cent of the patients have been under treatment for long periods of time for flat feet and other conditions. The actual cause of the pain in the extremities has not been recognized. I do not believe that it is fair for us to put the entire blame on the patient, but we ought to understand that some of the blame is our own. Lack of careful, complete examination of the extremities is responsible for failure to diagnose the condition.

Again I should like to say that I believe that the old term "peripheral vascular disease" is a term which we should discard. The manifestations which are peripheral in character are simply manifestations of a general disease involving the entire vascular tree. The vascular manifestations which we notice in the extremities are found even in the coronary vessels, and in a fair percentage of the patients who have died, evidence of disease of the same type, histologically, as found in the extremity is found in the coronaries.

The important thing is to improve the collateral circulation in every way possible. When it comes to spastic conditions, such as Raynaud's disease, it is all right to consider the use of sympathectomy but where the vessel walls already have evidence of changes in them, such as we find in Buerger's disease and arteriosclerosis, the removal of the

sympathetics will not cause a dilatation of these vessels.

When one begins to talk about these sympathectomies, we are dealing with structures close to the aorta, and it is not an operation to be taken too lightly. I do not care who the individual is, sometime something is going to happen, and if we do a major procedure in a patient who might have otherwise been treated by a simple procedure and he dies, we have something to account for.

The method of treatment as suggested and popularized in the last few years by Louis Herrmann and Mont Reid is no new procedure. The glass boot used was suggested by Junod at the University of Paris in 1835. While we are applying something new because we have electrical current to give us a negative and positive pressure, we are not applying a new principle but simply making use of those things which advanced civilization has helped to bring to our command for the treatment of our patients.

During the last year it has been my privilege to treat forty-five or fifty patients with diabetes, arteriosclerosis, Buerger's disease, and cases of fractures, and other things of that kind, where persistent swelling has occurred. I have at least three or four patients that I believe a year or two ago I would definitely have amputated their legs, and those patients are walking now on good limbs. Anything that offers an opportunity such as these tests that Dr. Veal has given us, and such methods as Louis Herrmann and Mont Reid have given us, should be used before surgery is undertaken. Effective simple measures for developing collateral circulation are more to be desired than surgical procedures which carry their own mortality.

Dr. D. I. Hirsch (Monroe): In the consideration of any subject, especially one as important as this, we should have a classification into which any of the cases will fall.

The one I use is the arteriosclerotic, inflammatory, neurogenic, and embolic.

I have had considerable experience with these cases myself, and though not fortunate enough to have a Pavaex machine with which to treat them, I believe that all of these cases eventually wind up with surgery of some kind.

There is one symptom that I note the doctor neglected, and that is pain. One of the early symptoms of these cases is cramps in the legs (and hands) that the patient has at night or while walking; these people come to you with no circulation, no pulsation in the extremities, which are very cold and clammy; it is amazing that they are able to walk.

As to the question of treatment, the application of roentgen ray over the suprarenals, whisky and papravine hydrochloride, are vaso-dilators worth while trying.

You can safely carry these cases along with a

dry gangrene for considerable time, but the moment you have a superimposed infection with swelling, the quicker you amputate the safer it is for your patient.

These cases are hard, they tax your thinking capacity. The diagnosis is simple enough and can be made in the office. The classification is one which at times is speculative, and the treatment is different according to classification.

I had a recent experience with a case of Raynaud's disease which was peculiar. This case was sent to Tulane University Clinic where the sympathetics were injected with novocaine and the patient relieved temporarily. Later the right stellate nucleus was removed and the patient returned to me. He had a recurrence. I injected the left side and in attempting to inject the right side, some of the fluid entered the pleura and I had to stop.

This man made an uneventful recovery and I believe would have gotten well if we had done nothing for him surgically.

These cases are much more frequent than we would suspect.

Since our attention has been called to these cases by this most instructive paper of Dr. Veal's, I think we should have a common nomenclature or classification, the number of subdivisions makes no difference, for any of them will fall into one of the following headings, inflammatory, arteriosclerotic, neurogenic or embolic.

Dr. Rudolph Matas (New Orleans): As a pioneer worker and contributor to the advances which, in the last three decades, have developed the study of the peripheral vascular diseases into one of the most fruitful fields of clinical investigation, I appreciate the personal invitation of the chair to participate in the discussion of Dr. Veal's important paper. Dr. Veal deserves every encouragement and praise for the excellent way in which he has utilized the great opportunities offered by the Charity Hospital for the study of these diseases, and particularly for his own very creditable and original work in angiography with radio-opaque solutions. As the time is too limited to discuss Dr. Veal's paper in all its phases, I will confine my remarks to angiography, and especially to arteriography, as this is the salient feature of his communication.

Of course, no one questions at this late date that angiography, by which we mean the visualization of the blood-vessels by the injection of radio-opaque solutions,—is one of the most notable acquisitions of contemporary surgery for the clinical study of the anatomy, physiology and pathology of the vascular system; but, while recognizing its undoubted utility, we must be careful not to exaggerate its importance or to regard it as a method that can be adopted indiscriminately as an innocuous routine procedure. I am pleased that

Dr. Veal, despite his notable success, has prudently recognized the limitations of the method (especially of arteriography) and cautioned against its use or abuse in inexperienced hands. We must bear in mind that the injection of an artery such as the common femoral, the carotid or the subclavian, is in itself a surgical operation, whether this be done transcatheterically or by open exposure of the artery itself,—let alone the abdominal aorta, when attempts have been made to inject this great vessel by the posterior lumbar or paravertebral route, as this has been done repeatedly by Reynaldo Santos and his associates of the Portuguese school, who are the leading innovators and specialists in this practice. Nor will I include in this discussion the method of cerebral arteriography by carotid injection devised by Egaz Moniz, a leader in the same school, for the diagnostic differentiation of cerebral tumors and other lesions. Suffice it merely to mention these methods of intra-arterial investigation to realize that they are out of reach of ordinary practitioners and that, despite the success that they have attained in the hands of these remarkable specialists, they must still be regarded as too adventurous and debatable to be included in the present discussion.

There is enough material left for serious reflexion in the application of arteriography to the diagnosis, prognosis and therapy of the vascular diseases of the lower extremities. In regard to the injection of the common femoral artery, for example, we must look upon this as an operation which may be followed by consequences that entirely overbalance any benefit that might accrue from the procedure. This is particularly true of the punctures made into the artery transcatheterically. There are now a sufficient number of reported cases to show that the damage done to the artery by ineffectual attempts to enter its lumen may be sufficient to compel the ligation of the artery, or to cause its thrombotic occlusion, with gangrene of the distal parts, as a sequel. Again, there are cases in which the radio-opaque solution has missed the artery and has been injected into the perivascular tissue where it acted as a caustic, causing necrotic cellulitis, and death by secondary infection. And this is particularly true of the diabetic and aged arteriosclerotic subjects of feeble resistance. These accidents are, unfortunately, most likely to occur in the very subjects in whom the danger of ischemic necrosis is greatest, and in whom the arteriography is most frequently indicated and applied. It is also important to remember that no radio-opaque fluid, no matter how benign its reputation, even to Thorotrast (thorium dioxide) which is justly regarded as the least (locally) offensive of these agents, is not constant or invariable in its effects. It is not so much the solution, but the artery into which it is injected, that determines its reaction.

A compound such as Thorotrast, which is tolerated with seemingly perfect impunity by a large number of patients, will cause in others intense angiospasm and permanent endothelial lesions; and this is particularly true of those whose vascular endothelium has been highly sensitized by pre-existing arterial disease. Such are the patients suffering from chronic senile or presenile arteriosclerosis, diabetic, syphilitic or other toxic and infectious types of endarteritis, thrombo-angiitis obliterans, Reynaud's disease and other vasospastic disorders. Furthermore, the reactions of veins cannot be compared with those of the arteries which are so exquisitely sensitive to any alteration in the composition of the circulating blood. We know how infinitely more tolerant the veins are to all sorts of solutions; yet we know also how easily they are obliterated by relatively mild hypertonic solutions of sugar and salt; and how frequently veins become obliterated by repeated injections of Salvarsan and other arsenical solutions, to the extent that new veins have to be selected because those first injected have been obliterated. These facts, however, do not prevent us from using intravenous injections constantly for purposes of medication. But this relative tolerance of the veins does not apply to the arteries; for, in these, no solutions, even those which approach nearest to the physiological formulas of the serums, are free from reactions, more or less intense and durable, when injected with heterogeneous solutions. The great number of formulas that have been tried for radio-opaque visualization since Sicard and Forestier first introduced lipiodol in 1923, including Brook's 100 per cent solution of sodium iodide, the 25 per cent solution of the same salt used by the Portuguese angiographers, the Japanese lecithin-lipiodol compound, "Tombre", and still other solutions and colloidal emulsions of organic iodine derivation (abrodil, and uroselectan, for intravenous pyelography; tenebryl and parabradyl, and still others with different trade names) have all been abandoned in favor of Thorotrast. But even this substance, despite its relative painlessness, tolerance and low angiospastic effect, has its decided limitations. It is perhaps relatively safe when injected in normal, young and healthy human arteries, but never certain in the diseased or degenerated arteries of the aged or those whose arteries have been sensitized by pre-existent arterial disease. The latent or delayed dangers of thorotrast, due to its specific affinity for the reticulo-endothelial system and its fixation in the liver, spleen, bone marrow and lymphatics, limit its application to small doses, not to exceed 30 c.c., but even in these doses disastrous effects have followed its injection in arteriosclerotic subjects and other arteriopathies. The very thorough discussion at the French National Surgical Society at Paris, and

particularly in the proceedings of last February, quite suffice to show that thorotrast, even when injected in proper doses, is far from being an innocuous substance or an ideally safe agent for arterial visualization. It cannot be denied, however, that, since thorotrast has come into general and more discreet use, the number of accidents and complications that were so common when the iodine salts and derivatives were in vogue, have greatly diminished, and in consequence, the practice of arteriography has been much encouraged and developed.

My own experience with arteriography has been limited almost exclusively to the study of aneurysms. My first injection goes back to August 5, 1932; the patient was a robust young man of 27 years, who had a very extensive cirsioid aneurysm, caused by an accidental blow, which involved the left half of the face and scalp. This was an unusually favorable case for a radio-opaque visualization. Not having a supply of thorotrast at hand, I used a standardized manufacturers' solution of Neo-Iopax (uroselectan) an iodine derivative which had been used for intravenous pyelography, with apparently no ill effects. The patient was brought to the roentgen ray laboratory and one of the most prominent ampullar dilatations of the tumor selected for the injection. I had scarcely injected  $1\frac{1}{2}$  c.c. of the solution when the patient gave a scream of pain and fell back in a faint. Simultaneously, all the vessels which constituted the tumor were immediately transformed into hard, rigid and pulseless cords. The pain was so intense that the patient fell into collapse, which compelled me to desist from further attempted injection. The injection had evidently provoked a violent angiospasm which had arrested all the circulation in the arteriovenous tumor. It was fully one hour before the pain subsided and the patient recovered his senses. It seemed incredible that such a small quantity of the injected fluid should have caused such a violent and alarming vasospastic reaction. It was evident that, while the same substance was well tolerated by the veins, it was extremely irritating to the arteries. A radiograph taken 20 minutes after the injection still showed faint but clear traces of the opaque solution in the angioma. The patient was successfully operated and completely cured by an extensive scalp lifting operation which is fully described in the South. Med. Jour. for Sept., 1933. In contrast with this experience, I injected the internal carotid (May, 1934) with thorotrast for the purpose of localizing an obscure arteriovenous fistula in the intracranial internal carotid tract. In this case the injection caused no



pain or angiospasm, but it failed to give a clear view of the fistula, and only a blurred shadow in the temporal fossa at the base of the skull, which gave no clue to the exact seat of the arterio-venous anastomosis. In this case 12 c.c. of the thorotrast were injected, and no ill effects followed, despite the ligation of the internal and external carotid at the bifurcation. The operation was performed under local anesthesia, and the injection was given into the artery completely exposed by dissection. The only fault found with the arteriography in this case was its failure to reveal the seat of the fistula.

I have tried to inject aortic-thoracic aneurysms in two instances with large projecting sac, which bulged through the chest wall. In these cases it was especially desirable to exhibit the relations of the sac to the aorta, and particularly to define the seat and size of the orifice of communication with the aorta, as a preliminary to wiring the sac with Colt's apparatus. As in these cases the aortic stream cannot be controlled, the opaque fluid was washed away as fast as it was injected and failed to give the desired information, at best no more accurately than that given by the plain radiographs or the fluoroscopic screen.

In dealing with aneurysms of the extremities, particularly of the ilio-femoral and popliteal tracts in which the circulation can be controlled, and a view of the vessels can be obtained with relatively small doses of the thorium dioxide, the results are far more satisfactory, often brilliantly diagrammatic; but, even here, there are fallacies of interpretation in the most perfect films which make it impossible to depend upon them exclusively as criteria for the viability of the limbs after operation.

As applied to the lesions and diseases of the peripheral blood-vessels, especially those of the lower extremity, it is a most valuable addition to our diagnostic resources. It has already rendered very valuable service and has come to stay, but, in its present state of development, it has distinct limitations and objections which will probably be removed when a safer radio-opaque medium is discovered that will retain the advantages and eliminate the disadvantages of thorotrast. In the light of the collective experience thus far obtained, angiography and, especially arteriography must be regarded solely as a valuable adjunct to and not as a substitute for the methods of clinical research that are now available for the study of the peripheral vascular diseases. It should not be resorted to as a routine procedure, and only utilized in doubtful cases when other methods fail to give the desired information. In all ischemic states in which the vitality of the limb is obscure-

ly or manifestly compromised and gangrene is impending, the injections can only confirm a clinically manifest fact without benefit to the prognosis, and perhaps serve only to precipitate vascular reactions that will or may aggravate existing pathology.

There are other fallacies of interpretation and critical commentaries that apply to the value of angiography as a preoperative guide to the proper technic of the arterio-venous as well as the arterial aneurysms, but I cannot engage in these details without prolonging this already too lengthy discussion.

In conclusion, I recognize arteriography as a great advance in the methods of exploration of the vascular system which is pregnant with possibilities of far greater usefulness. Its history, however, is now only in the making and has not reached that stage of perfection or security that would justify its adoption as a routine procedure. The time has not come when we can visualize the arteries with anything like the simplicity and safety with which we can radiograph the limbs which they nourish. The numerous collective statistics that tell of its simplicity and safety cannot be accepted on their face value. A careful analysis of the individual cases would show, and has shown, not only numerous failures, but many narrow escapes from disastrous complications; many aggravations of preexisting ischemic disorders, and many amputations hastened which it is the purpose of the method to delay or to prevent.

Arteriography cannot be regarded as an exclusive method of exploring the resources of the peripheral vascular system. It can only be regarded as an adjunct to the existing effective and tried clinical methods of investigation. It should never be undertaken without a definite objective, intended to supply information that is not available by other methods. In every case we should ask, how much benefit to the patient can be reasonably expected from this procedure? Is the information that it may yield commensurate with the risk involved?

There can be no objection to the method when it promises to yield information of positive therapeutic or surgical value; there is objection when it is applied solely for anatomical or scientific gratification or to complete the clinical record of an interesting case. It is devoutly hoped that time will soon come when an angiograph will be taken with as much impunity as a radiograph; but not yet.

Dr. J. Ross Veal (New Orleans, closing): I have not meant to convey the impression that we consider puncture of the artery and injection of a foreign substance a procedure entirely free from danger and to be lightly undertaken. On the other hand, we have selected the patients very

carefully and have followed them with equal care. In the several hundred cases in which we have employed this method, we have not seen any gross damage to the vessels themselves, and the patient suffers little discomfort, immediate or remote, if the injection is properly made. The greatest danger in the method is the retention of the substance in the reticulo-endothelial system, but we believe the small doses which we use guard against this risk. All our doses are far below the lethal dose and far below the point of danger. For the upper extremity 4 to 5 c. c. is sufficient for visualization of the vessels, and the dose for the lower extremity does not exceed 20 c. c.

I should like to stress that we have used arteriography in the study of all varieties of peripheral vascular disease, and have found it of diagnostic and prognostic value in many cases.

Dr. Hirsch, I believe, made the point that even if patients are tided over their first crises, they eventually succumb to gangrene. This is not true in the patients in this group whom we have been studying for the last three years, most of whom are markedly improved. Some patients who could not walk a block without pain when they first came to the clinic now can walk twenty-five or thirty blocks. We think these patients are fairly safe, and if they can be protected from infection their chances are certainly good.

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### HEMATURIA\*

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Blood in the urine is usually significant of some grave disorder in the urogenital tract. In the majority of cases, it is the earliest symptom of a pathological condition, the early and exact diagnosis of which is of paramount importance. It is urged, therefore, that all cases of hematuria be subjected to careful study at as early a date as possible following the initial bleeding, lest the insidious onset of a disease curable in its earliest stage should be missed and a life sacrificed by incompetence or neglect.

The time to examine the patient with hematuria is at the time of his bleeding. This is particularly important in patients whose hematuria is of renal origin. The postponement of the examination in this type of case until the urine is clear may very considerably add to the difficulties of diagnosis. Much valuable

time may be lost and unnecessary instrumentation carried out before the diagnosis is made. There will, of course, be very definite exceptions to the rule, particularly in those cases of associated acute infections of the lower urinary tract. Hematuria of varying degree is common in acute posterior urethritis of gonorrheal origin. In such a case the history, the associated symptoms and the urinary findings make the diagnosis obvious. In other cases, however, presenting no contra-indications to instrumental investigations, delay is indefensible.

Before proceeding with the examination, it is well to take into consideration certain associated factors. A family history, particularly as concerns carcinoma, tuberculosis, and hemophilic tendencies, may furnish valuable leads to diagnosis. The idiosyncrasies of certain individuals to various drugs and chemicals should also be borne in mind. A careful personal history will often elicit certain associated symptoms which direct particular attention to a certain portion of the urinary tract. Thus a history of gradually increasing obstruction to urination and urinary frequency, particularly in the early morning hours, coupled with hematuria, naturally directs attention to the prostate. Similarly a history of former attacks of renal colic, with or without associated hematuria, is highly suggestive of calculus in the ureter or renal pelvis. A not uncommon syndrome observed in young men, consisting of daily frequency of urination, premature ejaculation and terminal hematuria, occurs in certain cases of posterior urethritis, the source of the bleeding in this instance usually being an enlarged and much congested verumontanum. Such diagnostic leads should be regarded, however, as helpful only in so far as they direct attention to a particular level of the tract. The evidence furnished by the symptomatology in a given case is at best presumptive.

I have had opportunity to make complete urological investigation in a series of cases of hematuria. In this series, the distribution of the lesions causing the hematuria was as follows: 41 per cent of the hematurias were caused by lesions of the kidney and ureter while 59 per cent came from the bladder, prostate and urethra.

The importance of hematuria as a symptom

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\*Read before the Louisiana State Medical Society, New Orleans, April 29-May 1, 1935.

of neoplasm of the genito-urinary tract again becomes impressive when we note that, even in so small a series of cases, the hematuria was due in 22 per cent to malignant disease, and in an additional 7 per cent to a condition potentially malignant. Thus hematuria in one case out of four indicates a malignant disease of the genital or urinary organs.

In 25 cases in this series the origin of the bleeding was the kidney or ureter. There were 5 cases of posterior urethritis and verumontanitis; 1 case of urethral stricture; 1 case of tuberculous cystitis; 1 case of urethrotiginitis; 1 case of hydronephrosis; 2 traumatic cases; and 1 case of papillary cystitis. Three cases were hypernephromata, "the most common renal neoplasm"; all of them were far advanced when nephrectomy was performed. The results following nephrectomy in early hypernephroma are excellent, but unfortunately in all but exceptional cases the tumor is most extensive when it is first recognized. This is due largely to the difficulties of diagnosis. In the early case there is little or no appreciable change in the size of the kidney, the renal function shows little or no impairment and the deformity of the pelvis, upon which the diagnosis is largely based, is not present.

Not infrequently these early cases of hypernephroma, in which all tests and investigations show no abnormality other than the presence of blood, are classified as idiopathic hematurias. The author feels that this diagnosis should be made only after a most careful and exhaustive study and then with considerable reservation. It is probable that if some of these undiagnosed renal hematurias were surgically explored shortly after the initial bleeding, many more early hypernephromata would be discovered.

In this series of cases, there were 18 cases of calculus; 9 in the kidney; 6 in the ureter and 3 in the bladder. The presence of stone in the kidney or ureter is certainly not always an immediate indication for surgical treatment. It is certainly true that many of the small stones pass either spontaneously or following suitable instrumentation. When the size of the stone is such as to permit its passage and repeated examinations reveal a definite progress

toward the bladder, it is perfectly safe to temporize with the case. In cases, however, in which the stone in the ureter is of a size which will prevent its passage through the mural portion of the ureter, or if it is incarcerated and fixed at a constant level in the tract, operation should be resorted to for its removal. The treatment to be recommended in renal calculus will depend in large measure upon the size of the stone, its location, the degree of obstruction it is causing and the presence or absence of infection.

Stones which lie in a position to interfere seriously with the normal emptying of the kidney should be removed surgically, and this is particularly true when there is a complicating infection.

There were two cases of renal tuberculosis in this series of cases. The finding of the tubercle bacillus from one side is not necessarily an indication for an immediate nephrectomy, providing the bladder has not suffered involvement and the pyelogram shows no evidence of a definite cavity formation. In cases, however, in which the bladder symptoms are severe the removal of the renal focus is indicated, because of the risk of irreparable involvement if the focus in the kidney is allowed to remain. Experience has shown that when cavity formation in the kidney has been demonstrated, non-surgical methods of treatment are unavailing.

There was one case of sub-mucous fibrosis. This interesting condition produces all of the symptoms of an intense cystitis. The urine, however, is usually clear and not infrequently negative microscopically. The bladder capacity is small (50 to 100 c.c.). The bladder mucosa is normal when not distended. With overdistention the mucosa is torn and bleeding results. It is treated by high frequency current applied to the lesion.

In this series there were 17 cases of benign prostate hypertrophy and 4 cases of carcinoma of the prostate. The benign forms more frequently produce hematuria than the malignant, which is due to the fact that, in the majority of cases, carcinoma begins in the posterior lobe at a considerable distance from the urethra and vesical orifice, whereas in the benign hypertrophy the tumor lies just beneath the mucous



membrane which not infrequently becomes congested during the straining efforts of urination and bleeding results.

There were 16 bladder tumors, of which 12 were non-infiltrating and 4 infiltrating. All of these, if not actually malignant, should be considered potentially so. The more or less general confusion among urologists regarding the treatment of bladder tumors is in large measure due to their classification. In my own experience, the most practical classification is based upon whether or not the tumor is infiltrating. In the non-infiltrating varieties practically all will respond to endovesical methods of treatment, which consist of surface application of radium, the application of the high frequency current or both. While the proportion of non-infiltrating tumors will vary somewhat depending on the series, they usually range between 40 per cent to 50 per cent. The results of treatment on the non-infiltrating varieties are excellent in so far as the destruction of the primary tumor is concerned. In the infiltrating type, it is futile to attempt treatment by non-surgical methods. If possible, resection should be carried out as this method of treatment offers the greatest prospect of success. This is possible in comparatively few tumors of this type, because of their extent and loca-

tion and the results in the vast majority of cases are most unsatisfactory. I really think there is no doubt but that the time element has a great deal to do with the curability or incurability of bladder tumor and that the chances for cure are inversely proportional to the age of the tumor. There are no doubt cases of tumor which give no warning of their presence until they are definitely infiltrating, but I am sure that the investigation of the bladder tumor case which is carried out very promptly after the initial bleeding will, in the majority of cases, prove to be the type which is responsive to treatment. I always check these bladder tumor cases every six months or oftener if I think it advisable.

If I could impress upon every man practising medicine the fact that in 50 per cent of all cases hematuria is produced by tumor and that a large majority of these cases are malignant or potentially malignant, we would do more to reduce our cancer mortality and morbidity than can possibly be done in any other way.

In concluding, I wish to say one cannot procrastinate with hematuria. It is a symptom demanding immediate, careful and complete urologic investigation, as it often indicates conditions menacing the integrity of the organ involved, if not the life of the patient.

#### DIFFERENTIATION OF SO URCES OF HEMATURIA

	RENAL	VESICAL	URETHRAL
COLOR OF BLOOD: MIXTURE WITH URINE:	Often smoky Intimately mixed with urine	Often not quite bright red Some mixture with urine	Bright red Appears first
CLOTS: OCCURRENCE:	Worm-like clots Continuous for a few days	Sometimes large clots More or less continuous	Rare
PAIN OR TENDERNESS:	In loins	In hypogastrium	Intermittent
MICROSCOPICALLY:	Excess of renal epithelium or casts covered with RBC.	Excess of bladder squamous epithelium	In urethra
CAUSES:	<ol style="list-style-type: none"> <li>1. Tumors</li> <li>2. Calculus</li> <li>3. Acute or chronic nephritis</li> <li>4. Trauma</li> <li>5. Tuberculosis</li> <li>6. Syphilis</li> <li>7. Hydronephrosis.</li> <li>8. Pyonephrosis</li> <li>9. Pyelitis</li> <li>10. Movable kidney</li> <li>11. Embolism and infarct of kidney</li> <li>12. Thrombosis of renal veins</li> <li>13. Aneurysm of renal artery</li> <li>14. Pregnancy</li> <li>15. Chronic passive congestion</li> <li>16. Ureteritis (so-called idiopathic loop hole diagnosis)</li> </ol>	<ol style="list-style-type: none"> <li>1. Tumors: benign, malignant</li> <li>2. Trauma</li> <li>3. Cystitis: acute, sub-acute</li> <li>4. Syphilis: chronic encrusted stone</li> <li>5. Tuberculosis</li> <li>6. Trigonitis</li> <li>7. Diverticula</li> <li>8. Parasitic diseases</li> <li>9. Prostatic—hypertrophy, malignant, trauma, inflammation</li> </ol>	<ol style="list-style-type: none"> <li>1. Posterior urethritis</li> <li>2. Verumontanitis</li> <li>3. Injury</li> </ol>

## DISCUSSION

Dr. H. W. E. Walther (New Orleans): Some years ago I was privileged to read, before this Society, a paper on hematuria and the conclusions then drawn from my observations tally closely with those of Dr. Milam. It is quite proper for those who daily contact patients with hematuria to reiterate the possible dangers that might ensue where this symptom is treated lightly.

In my review, above mentioned, it was found that 51 per cent of the hematurias were due to new growths somewhere in the genito-urinary tract and, furthermore, that 72 per cent of these tumors were malignant. Rathbun reported from the Brooklyn Hospital in 1933 a series of hematurias in which over 50 per cent were due to urogenital neoplasms and of these over 60 per cent proved to be cancer. Figures such as these could be quoted *ad infinitum*, from observers both here and abroad; they all tell the same story and issue the same warnings. It would seem therefore incumbent to all practitioners of medicine to vigorously insist upon each patient with bloody urine seeing a specialist promptly in order that an accurate diagnosis be made; procrastination over a period of months or years may spell the difference between being able to save or lose a life.

Now it seems to me that the physician is becoming more cancer-conscious all the time, thanks to such timely presentations as the one we have just listened to. But the message is not getting over to the average man and woman on the street. Here is where our efforts must be directed. The school child gets plenty of attention, but the adult and those in middle life seldom receive talks on cancer prevention. Occasionally, before a woman's club, some one will warn against lumps in the breast remaining or neglecting uterine bleeding after menopause. But how seldom are they told the dangers of looking indifferently upon hematuria? We must see that the layman is made better acquainted with this dangerous symptom. Such effort would again demonstrate to the public that preventive medicine is a tangible asset.

Dr. W. A. Reed (New Orleans): We are all indebted to Dr. Milam for his excellent presentation of a subject about which considerable has been said and still more has been written. Nevertheless hematuria must be ever present in our mind each time a medical survey is made of any case that we are called upon to examine. Too much importance cannot possibly be given to the finding of macroscopic and even microscopic blood in the urine.

Every one of us here realizes that hematuria is a red flag of danger requiring immediate investigation, but we frequently fail to appreciate that a true hematuria may, and does exist in the face of a hazy or even crystalline clear urine, which

when properly examined reveals from 10 to 30 red blood cells to the microscopic field.

Many a patient complaining of a slight urinary frequency with occasional burning on urination has lost his one and only opportunity of being cured of an early malignancy of the bladder or kidney, simply because he appeared to be in perfect health, had lost no weight, was suffering no real pain and voiding urine that was perfectly clear to the eye. Ten or fifteen years ago there was possibly a reasonable excuse for not doing or having done a complete urological study of such cases, due to the lack of modern equipment and properly trained men. Such certainly is not the case at the present time. Even in smaller towns is to be found a modern roentgen ray machine and at least one physician who is capable and equipped to do diagnostic instrumental urology. When it is not practical or possible to obtain retrograde pyelograms, intravenous urography will often reveal an unsuspected renal tumor, dilated kidney pelvis or filling defects of the bladder long before the onset of pain or cachexia.

Each one of us who have confined our work to urology for any length of time can now boast of a rather long list of apparently complete cures of malignancy of the urinary tract. This, I am most positive, is due not entirely to our improved methods of treatment, nearly so much as it is to the fact that we now heed the danger signal of even microscopic hematuria, and promptly set about to determine the cause of it.

In conclusion permit me to say that a careful urine analysis, a rectal examination of the prostate, a simple roentgen ray picture, and possibly a cystoscopic examination will lower the morbidity and mortality of malignancy of the urinary tract more than anything else that can be done.

Dr. M. H. Foster (Alexandria): Some twelve years ago, when our Parish Medical Association met in Chicago, we had the pleasure of hearing Dr. Eisendrath of the Cook County Hospital give the source and etiology of hematuria. He took a dollar and split it up in so many cents, comparing it with so many per cent, giving a certain percentage of these cases as of genito-urinary origin. I was somewhat at sea to put my finger on the cause of hematurias which turned up in my practice.

Unless hematurias are produced by some other and obvious cause, I want to know if there is some urinary tuberculosis or neoplasm.

A few years ago a man came to me for an examination, with a story that he had had one attack of hematuria ten years previous. There were distinct tuberculous ulcers about the right ureter orifice with the ureterovesical fistula which transmitted the catheter back into the bladder after it had been passed into the ureter. He was cured and is still alive and apparently healthy.

The second cause, or neoplasms about the urinary system, is perhaps more numerous than we realize. On the twelfth of this month, a lady fifty-six years of age came to me with the story that she had been bleeding for three years. Examination showed four benign bladder papillomata, which were destroyed by electrocoagulation.

There is an additional cause of hematuria, which is usually slight. We do not want to overlook the work of Falsom, as given before the Section on Urology of the American Medical Association, in which he calls attention to paravaginal cystitis. If you overlook that you are going to overlook one of the causes of hematuria, which causes considerable distress in the female, whenever it occurs.

Dr. DeWitt T. Milam (closing): Naturally, I thought, when selecting a subject that all the doctors come in contact with so often, that we would have a more or less open discussion. I want to thank Dr. Walther, Dr. Reed and Dr. Foster. I naturally expected some of the general practitioners or internal medicine men to have something to say.

I just want to emphasize again one thing I did not bring out. Hematuria covers volumes, and I had fifteen minutes, and I tried to take up only about seven or eight minutes of your time and make it short, and I would say sweet. One thing I did not emphasize very much is that very often we have hematurias where the patient has no pain, and that is another thought that I wanted to leave with you. I thought someone might bring it out, but they did not. I didn't discuss it, but barely mentioned it. I want to leave that thought with this meeting today, that when you have blood, in the great majority of cases, you have no pain at the beginning.

## TULAREMIA: A STUDY OF 69 CASES\*

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NEW ORLEANS

Synonyms: Plague-like Disease of Rodents, Deerfly Fever, Rabbit Fever, Francis' Disease. Tularemia is an infectious disease caused by the *Bacterium tularensis*. It is primarily a disease of rodents (ground-squirrels, and rabbits.) It is transmitted from rodents to man: (a) by the bite of infected insects (ticks, flies, fleas, lice, and bed-bugs); (b) by contamination of the hands, conjunctivae, or other parts of the body with infected material from rodents,

ticks, and flies; (c) by eating the flesh of infected animals that has not been sufficiently cooked. It has seemed doubtful to me whether the medical profession in Louisiana has been sufficiently interested in the disease and hence my reason for bringing the subject to your attention.

Kerlin<sup>1</sup>, in 1928, read a paper before this society reporting the first case of tularemia recognized in Louisiana. This is the only paper on the subject that has been presented to the society up to the present time. We note in the New Orleans Medical and Surgical Journal that Lloyd,<sup>2</sup> Goldsmith,<sup>3</sup> and Kahn<sup>4</sup> reported cases occurring in Louisiana; Collins,<sup>5</sup> a paper on "The Transmission of Tularemia by the Domestic Cat," and Lewis,<sup>6</sup> "Some Observations in Simple Blood Smear Agglutination Tests in Tularemia, Typhus and Undulant Fever." Thus in the past seven years only three articles and three reports of cases have appeared in the New Orleans Medical and Surgical Journal, the official journal of our society.

The material for this paper is taken from 8 cases that we had at the J. T. Nix Clinic and 61 cases from the Charity Hospital at New Orleans. Although there were 78 cases clinically diagnosed as tularemia at the hospital, I have included only the cases which had a positive agglutination test.

### HISTORY

The history of tularemia is as interesting as a romance. As you know, it is the only disease that, from beginning to end, has been worked out by American scientists, and the major part of this work was done by members of the U. S. Public Health Service. It seems probable that Moses, that wise sanitarian of antiquity, who lived in the thirteenth century before Christ, might have had tularemia in mind when he wrote in Leviticus XI:6-8 "The hare also ----- The first of these you shall not eat, nor shall you touch their carcasses, because they are unclean to you." In 1904 a California boy<sup>7</sup> of fifteen years gave the first written description of the disease. Twenty-four years later his blood was examined by Francis and found to agglutinate *Bacterium tularensis*.<sup>7</sup> In 1907 Martin, an ophthalmolo-

\*Read before the Louisiana State Medical Society, New Orleans, April 29-May 1, 1935.

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gist of Arizona, described five cases in his practice.

In 1911 Pearse saw six cases in Utah and called them "deer-fly fever". In the same year McCoy (U. S. P. H. S.) studied cases in the California ground-squirrels, which he called "plague-like disease of rodents". In 1912 McCoy and Chapin (U. S. P. H. S.) discovered the *Bacterium tularense*, so named after Tulare County, California, where the infected ground-squirrels had been found.

In 1914 Vail, Werry and Lamb of Cincinnati isolated the organism from a human case. In 1919-1920 Francis (U. S. P. H.) recognized the identity of "deer-fly fever" and "plague-like disease of rodents" and named the disease tularemia because he found *Bacterium tularense* in the blood.

#### TRANSMISSION OF THE DISEASE

Transmission is only from infected material of rodents or insects to man. There is no record of the transmission of the disease from man to man by direct contact or by the bite of an insect which has previously bitten an infected human being. No other disease has claimed such a high percentage of laboratory personnel. Thus to 1926 there were on record twenty cases of laboratory infection, fifteen of these being members of the U. S. Public Health Service.

Madame Ohara in 1925 allowed herself to be inoculated with the infected material from a rabbit and she is the only example of the experimental transmission of tularemia to a human volunteer.

In Louisiana the disease is usually acquired from handling infected wild rabbits. Thus in our 69 cases, 48 gave a history of contact with rabbits, 1 with a squirrel and opossum, 2 with squirrels, 1 with possibly a tick. This is interesting in as much as when Kerlin reported his 4 cases, 3 had had contacts with ticks and there was possibility of tick contact in the other case. Tick bite as a source of infection must not be lost sight of, for in 1928 Kerlin quoted a communication from Francis, who stated that 24 cases were on record for the Southern States as follows: Louisiana 8, Arkansas 6, Tennessee 6, Texas 2, Oklahoma 2. The acquisition of tularemia from the ingestion of insuf-

ficiently cooked infected rodents used as food is well illustrated by Crawford.<sup>8</sup> He reports from Orangeburg, South Carolina, 6 cases with 2 fatalities in the infant cases, from the ingestion of insufficiently cooked rabbit meat.

#### SEASONAL OCCURRENCE

In Louisiana the open hunting season for hares and rabbits extends from November 1 to February 15. The seasonal occurrence of our cases was as follows: January 11, February 13, March 9, April 4, May 4, June 3, July 2, August 0, September 4, October 1, November 3, December 15. The months of January, February, March and December furnished 48 cases or 69 per cent of the cases. This corresponds closely with the rabbit hunting season.

#### NUMBER OF CASES

To May 15, 1929, *i. e.* ten years after Francis had placed tularemia in a definite class, 806 cases had been reported in the United States according to the U. S. Public Health Service. The Annual Report of the United States Public Health Service for 1932 gives 945 cases with 31 deaths, a mortality of 3.2 per cent. These figures show in a striking way that the disease is being recognized. In the past no doubt cases went unrecognized or were incorrectly diagnosed as typhoid fever, influenza, glandular fever, lymph-adenitis or what not.

The following records will give some idea of the prevalence of the disease in Louisiana.

Year	La. State Board Of Health	Charity Hospital At New Orleans	J. T. Nix Clinic
1927	8		
1928	14	4	
1929	19	3	
1930	17	10	2
1931	26	8	0
1932	38	8	0
1933	37	14	2
1934	33	14	3
1935			1
	192	61	8

The records of the Board of Health and the Charity Hospital for 1935 were not looked up and one of the Clinic cases occurred in January 1935.

## DISTRIBUTION

To date human cases have been reported from 43 states of the United States and from Japan, Russia, England, Norway and Sweden. No doubt as physicians are more on the qui vive it will be found that the disease has probably a world-wide distribution.

## SEX

Of the 69 cases, 41 were male, 28 females. Of the 61 Charity Hospital cases 39 were males (24 white, 15 negro), 22 females (17 white, 5 colored). Of the 8 Clinic cases, 6 females, 2 males (all white).

Age YEARS	Table of Age Incidence. NUMBER OF CASES
14-20	12
21-30	16
31-40	17
41-50	13
51-60	9
61-70	1
71-80	1
	—
	69

81 per cent of the cases occurred between the ages of 14 and 50 years. The youngest case was 14 years and the oldest case was 80 years.

## PATHOLOGY

The picture is that of a subacute infective granuloma closely resembling tuberculosis. The lesions are chiefly found in the skin, the regional lymph glands, spleen, liver and lungs. The characteristic findings are caseous necrosis and hyperplasia of the reticulo-endothelial cells. Not many cases have come to autopsy. Foulger, Glozer and Foshay,<sup>9</sup> in reviewing the literature in 1932, could find only 8 cases and they reported an additional one in which for the first time lesions were found in the peritoneum and *Bacterium tularense* was demonstrated for the first time in sections of human tissues.

## CLINICAL TYPES

Francis,<sup>10, 11</sup> describes four clinical types: (1) The ulceroglandular type, in which there is an ulcer of the skin and a regional lymph adenopathy. This forms the great majority of the cases. Of our 69 cases, 56 belonged to this type, and 7 of the 8 clinic cases. (2) The oculoglandular type, in which there is a primary conjunctivitis followed by a regional

adenopathy. There were 2 such cases in our series. (3) The glandular type, which shows only glandular enlargement without any visible primary lesion. Eight such cases were found. Finally (4) the typhoid type, which shows neither a primary lesion nor a glandular enlargement, but which has fever as the prominent symptom. Three cases occurred in our series.

## INITIAL LESION

The initial lesion is a small, superficial, painful, indolent ulcer. It is easy to overlook, unless we are very careful in our physical examination or unless the patient directs our attention to it. In the 69 cases, the lesion was on the hand in 55, on the eye in 2, on the elbow in 1, and no lesion in 11.

## ADENOPATHY

The axillary and epitrochlear glands together were involved in 37 per cent of cases, the axillary alone in 30 per cent and the epitrochlear alone in 2.8 per cent.

## CLINICAL COURSE

The incubation period varied in our cases between 1 and 10 days. The onset is sudden with fever, headache, general body pains and chilliness. Vomiting may occur. These symptoms are similar to those of influenza and many cases at the onset are so diagnosed. Skin eruptions may occur which may be macular, papular, maculo-papular or papulo-pustular. The course of the disease is marked by fever, weakness, loss of weight, recurring chills, sweats and prostration. The fever reached 105.8° F. in one case. Some cases are afebrile. The average duration of the fever in 39 cases was 37 days. In one case it lasted 150 days. Convalescence is slow. Patients may not feel normal before six months or a year. One of our cases did not feel entirely well until the end of three years.

## DIAGNOSIS

The diagnosis in the ulceroglandular, oculoglandular and glandular types is made from the physical examination, the history of the case and the agglutination reaction. The agglutination test is so consistently positive that I doubt if it is permissible to make a positive diagnosis when the reaction remains negative. No agglutinins are present during the first week but

are present during the second week. The agglutination test has been found positive twenty-four years after the onset of the disease. In the typhoid type the diagnosis can be made only by keeping in mind the possibility of tularemia as a cause of obscure fever and then confirming our suspicion by the agglutination test. Lee Foshay<sup>12</sup> has investigated the possibility of early diagnosis by an intradermal test. Suspensions of heat-killed organisms give a strong reaction and are not safe, so that formaldehyde-killed bacteria are treated with either hydrogen peroxide or nascent nitrous acid to detoxify the bacteria. By this procedure positive reactions have been obtained in early cases with negative agglutination reactions, which subsequently became positive. The test has been applied on the second day of the illness and became positive in 48 hours.

#### LABORATORY EXAMINATIONS

The agglutination test was positive in all cases.

The Wassermann test was made in 60 cases and was negative in 56, positive in 4.

The total white count was made in 51 cases. The average 9,558 per cu. mm., lowest 3,500, highest 26,050.

The total red count was made in 31 cases. The average was 4,640,000 lowest 3,115,000, highest 6,160,000.

Hemoglobin was tested in 33 cases. The average was 65 per cent, lowest 30 per cent, highest 59 per cent.

The differential count was made in 49 cases:

Small lymphocytes	average 25, variation 6 to 64;
Large lymphocytes	average 6, variation 0 to 8;
Neutrophils	average 66, variation 34 to 89;
Eosinophils	average 0.8, variation 0 to 10;
Basophils	average 0.2, variation 0.2 to 3.

Urinalysis was made in the 69 cases. Traces of albumin were found in 6, hyaline casts in 9, granular casts in 4.

#### MORTALITY

The mortality of the disease is slightly less than 4 per cent. There was one death in the 61 Charity Hospital cases and none in the 8 Clinic cases. The mortality of this series, 1.4 per cent, is unusually low.

#### IMMUNITY AND PROPHYLAXIS

Immunity is lasting after one attack. Rubber gloves should be worn by those handling wild

rabbits and other rodents which may be contaminated. The meat of rodents which is used as food should be thoroughly cooked as it is then harmless as food. E. F. Smith<sup>13</sup> quotes from the U. S. Public Health Service on the handling of rabbits as follows: "Beware of wild rabbits, one per cent of them is infected with tularemia. Rabbit meat thoroughly cooked is harmless as food, because a temperature of 133° F. (55°C.) kills the infecting organism. Rubber gloves should be worn by those who have to dress wild rabbits. Beware of the wild rabbit which a dog or cat has caught, or which a boy has killed—it is probably a sick rabbit. The hunter should not shoot his rabbits at the point of a gun; let him shoot him on the run at 75 yards, say."

#### TREATMENT

This is symptomatic. Rest in bed is very important. A mild antiseptic lotion may be applied to the ulcer but it should not be incised as to do so would only aggravate the lesion. The regional lymph glands should not be incised unless they are very soft and the overlying skin very thin, showing that suppuration is inevitable.

A great variety of treatments has been suggested such as mercurochrome, salvarsan intravenously; the use of phenol as counterirritant locally in glandular cases; acid mercuric nitrate and arsenical paste to the initial lesion, and ultraviolet rays. Lee Foshay<sup>14</sup> used a specific anti-serum prepared from a goat. This was tried on 10 patients and results were said to have been very good in all these cases except one whose treatment was begun in a moribund condition. W. S. Fisher<sup>15</sup> reports a favorable report of the use of neo-arsphenamine in 4 cases. W. M. Simpson,<sup>16</sup> in reporting 103 cases, claims that Foshay's goat antitularensis serum is a promising specific therapeutic agent against the disease. When 10 c. c. of this serum were injected intravenously on two successive days the clinical symptoms disappeared forty-eight hours after the second injection.

R. Alexander Bate<sup>17</sup> is the first one to treat a case by transfusion from a blood donor who had had tularemia. The improvement was gradual. H. L. Baer<sup>18</sup> applied a dose of a half unit of unfiltered roentgen rays to the pri-



mary lesions of tularemia. The pain in the finger in the first case was relieved in 3 hours and in the second case in 6 hours. This is very interesting as the patients at times complain bitterly of the initial lesion which continues painful in spite of local measures applied for relief. Both patients made an uneventful recovery. Previous to reading this form of treatment, I had requested one of my cases to allow me to apply radium to the initial lesion in an attempt to relieve the pain but he had refused this treatment which as far as I know has never been tried.

A brief description of the eight Clinic cases follows.

Case I. Mrs. L. G., white, aged 53 years, was seen on December 22, 1930. The day following the skinning of a rabbit she developed fever of 103°F. Fever continued for ten weeks. She had a painful indolent ulcer on the exterior surface of the right hand. The ulcer healed in two months. The right epitrochlear gland reached the size of a pigeon egg and the axillary gland was the size of a hen egg. The course of the disease was characterized by severe general pains and profuse sweats. On account of the pains, acute respiratory symptoms that she had at the onset and the fever, I first made a diagnosis of influenza. In her own words she felt like a "mad dog". On January 7, 1931 tularemia agglutination was positive in dilutions up to 1 to 100. Cystitis was a complication in this case. In March, 1934 she said that her thumb and arm were still occasionally sore. Convalescence lasted nearly three years.

Case 2. Mrs. J. W., white, aged 28 years, was admitted to Hotel Dieu on December 17, 1929 complaining of an infection of her left index finger, which she had stuck while sewing three weeks previously. Her fever had ranged between 103° and 105°F. The finger was swollen, slightly painful and the skin was white in some areas and purple in others. A lymphangitis on the anterior surface of the arm and a slight axillary adenitis were present. Three days before and also on the day of her admission to the hospital the finger had been incised. A slight amount of pus was obtained on the second incision, none on the first. The course of the disease was characterized by profuse sweats and a fever that lasted four weeks.

As the Wassermann reaction was positive we thought that we were dealing with an infection resting on a syphilitic background. Three weeks after leaving the hospital the patient came to the Clinic complaining of pelvic pains. At this time the finger was still draining and the axillary glands were sensitive, matted together and the size of a

hen egg. The diagnosis of tularemia seemed obvious at this time. Her agglutination was positive up to 1 to 300. This was the only case seen at the Clinic with a negative rabbit exposure history.

Case 3. Mrs. G. H., white, aged 49 years, was seen on December 12, 1933. Ten days after cleaning some rabbits which had been killed in Jefferson Parish Louisiana, she developed an ulcer on the extensor surface of the middle finger of the right hand. The diagnosis of tularemia was made as soon as I saw her but had been overlooked by the nose and throat specialist, whom she had consulted for headache. The right epitrochlear gland was the size of a pigeon egg and the axillary glands the size of a hen egg. There was also a marked cervical adenopathy. The clinical course was characterized by severe headaches, general pains, emaciation and fever that lasted one and a half weeks. Tularemia agglutination was positive in dilutions up to 1 to 480. The axillary glands reached the size of a closed fist and fluctuated. The overlying skin became red and very thin. This was the only case in which it became necessary to incise the glands. A thick, white, cheesy material, resembling tuberculous pus, was obtained. The patient was relieved and the wound healed in about two weeks.

Case 4. Mrs. L. A., white, aged 56 years, was seen on December 12, 1933. Two days after cleaning a rabbit she developed fever, two weeks later a sore thumb, and a week later soreness of the axillary glands. The rabbit had been killed at Little Woods in Orleans Parish, Louisiana. The patient had acute respiratory symptoms, general pains and an irregular fever. She also complained of cystitis and the urine showed pus and a trace of albumin. For two weeks the temperature ranged between 102° and 103° F. and the physical examination did not seem to reveal the real cause of her trouble. At the end of this time the nurse called my attention to an almost imperceptible ulcer on the left thumb, which was slightly painful, and to a painful swelling in the left axilla. The diagnosis was now obvious. The agglutination for tularemia was found positive in dilutions up to 1 to 320. This patient ran a stormy course as the disease was complicated by cystitis, cholecystitis and acute respiratory infection; moreover, she had a relapse, just as one sees in typhoid fever. Her fever lasted fourteen weeks.

Case 5. Mrs. J. H., white, aged 55 years, was seen on January 9, 1934. Two days after cleaning a rabbit she developed fever and an infection of the left index finger. Her clinical course was characterized by dyspnea, dizziness, pains in the right upper abdominal quadrant, signs of cardiac decompensation and fever which reached 103.2° F. and lasted three weeks. This was our only case that failed to show a regional adenopathy. The

agglutination was positive in dilutions up to 1 to 480. Incision of the finger liberated a very foul, sero-sanguinous fluid, and somewhat relieved the patient. Three months and a half after the onset of the disease, the finger, wrist, elbow and shoulder were still painful at times. This patient, who weighed 280 pounds, lost 25 pounds in three and a half months.

Case 6. Mr. A. L., white, aged 43 years, a dealer in vegetables and game, consulted us on December 19, 1934. A month previous he had stuck a splinter in his hand and the next day he had skinned some rabbits. The following day he had fever and two weeks later he had noticed a swelling near the elbow. This was the size of a pigeon egg. Examination showed that the axillary glands were the size of a hen egg, but the patient did not seem to have noticed them. In the palm of the right hand were two small, painless superficial ulcers. The hand had been painful for only a week. The glands were still sensitive. The physician who had seen him previously to us had made the correct diagnosis.

The clinical course was characterized by chilly sensations and fever up to 102° F. which lasted two weeks. His agglutination was positive in dilutions up to 1 to 160.

The patient refused to take to bed and kept on working.

Case 7. Mr. F. P., white, aged 44 years, a vegetable, fish and game dealer, was seen on December 10, 1934. Three days previous to his illness he had skinned some rabbits and a few days before this he had stuck his right thumb with some fish or shrimp. His clinical course was characterized by sore throat, general aches, irritability, a great deal of soreness and pain of the initial lesion and fever which reached 103.4° F. and lasted two weeks. He was an intractable patient and remained in bed only four days at the onset of his disease, the rest of the time he kept working. His agglutination was positive in dilutions up to 1 to 80.

Case 8. Mrs. E. F., white, aged 80 years, while under our treatment for acute cardiac decompensation in December, 1934, casually mentioned a soreness of her left thumb. The history revealed that three days after she had stuck her finger while cleaning a rabbit, the finger had become sensitive. A very small, slightly painful, indolent ulcer developed as well as a slight axillary adenopathy. The clinical course was afebrile. This was the mildest of our cases. The agglutination was positive in dilutions up to 1 to 320.

TABLE OF CLINICAL FINDINGS

Case	Year	Month	Sex	Age	History of		Incuba- tion days	Site of Initial Lesion	Duration of Fever Weeks	Adenopathy	
					Rabbit Contact	Rabbit Where From				Epitrochlear	Axillary
1	1930	Dec.	F	53	+	Market	1	Right thumb	10	+	+
2	1930	Dec.	F	28	0	0	3	Left index	4	0	+
3	1933	Dec.	F	49	+	Jefferson Parish, La.	10	Right middle finger	6	+	+
4	1933	Dec.	F	56	+	Orleans Parish, La.	2	Left thumb	14	0	+
5	1934	Jan.	F	55	+	Market	2	Left index	3	0	0
6	1934	Dec.	M	40	+	Market	3	Right thumb	2	0	+
7	1934	Dec.	M	43	+	Market	1	Palm rt. hand	2	+	+
8	1935	Jan.	F	80	+	Market	3	Left thumb	0	0	+

TABLE OF LABORATORY FINDINGS  
BLOOD

Case	Aggluti- nation	Total Leukocytes	Lympho-		Eosinophils	
			cytes Small	cytes Large		
1	1:100	.....	.....	.....	.....	.....
2	1:300	9300	18	1	81	0
3	1:480	11750	40	2	58	.....
4	1:320	.....	.....	.....	.....	.....
5	1:480	8250	22	8	70	0
6	1:80	9750	23	4	72	0
7	1:160	8250	27	2	69	2
8	1:320	9500	23	0	78	0

URINALYSIS

Case	Albumin	Casts	Pus
1	.....	.....	.....
2	Trace	0	0
3	Trace	0	++
4	Trace	Hyaline	++
5	Trace	Hyaline, granular	+
6	0	0	0
7	0	0	0
8	0	0	0

## SUMMARY

1. A brief review of our present knowledge of tularemia has been presented.

2. The pertinent findings in 69 cases, 61 from the records of Charity Hospital and 8 from the J. T. Nix Clinic, have been noted.

3. Nearly 70 per cent of the cases gave a history of having handled wild rabbits.

4. A sufficient number of cases occur, especially during the rabbit hunting season, to warrant our keeping the disease in mind.

5. Because of the fact that two of our cases insisted on working while having the disease and that one of our cases was afebrile and so mild that it required no medical treatment, I am led to suspect that many cases may occur without seeking medical consultation and get cured without any treatment.

6. The mortality of this series was exceptionally low, only one of the 69 cases having died, 1.4 per cent in contrast with the usual mortality of 3.5 per cent.

7. Attention has been called to specific serum therapy and roentgen ray therapy. Both these treatments seem promising.

In conclusion, I wish to thank Dr. Arthur Vidrine, Superintendent of the Charity Hospital, who allowed me to study the hospital records and also the Louisiana State Board of Health, that furnished me the yearly number of cases that had been reported to it.

## BIBLIOGRAPHY

1. Kerlin, W. S.: Tularemia, review of literature with report of cases. *New Orleans Med. and Surg. Jour.*, 81:10, 1929.
2. Lloyd, T. P.: Report of a case of tularemia occurring in Caddo Parish. *New Orleans Med. and Surg. Jour.*, 79:11, 1927.
3. Goldsmith, B.: A case of tularemia. *New Orleans Med. and Surg. Jour.*, 80:8, 1928.
4. Kahn, L. L.: Tularemia; Report of cases. *New Orleans Med. and Surg. Jour.*, 85:9, 1933.
5. Collins, M. M.: The transmission of tularemia by the domestic cat. *New Orleans Med. and Surg. Jour.*, 86:2, 1933.
6. Lewis, S. J.: Some observations in simple blood smear agglutination tests in tularemia, typhus, and undulant fever. *New Orleans Med. and Surg. Jour.*, 83:1, 1930.
7. Simpson, W. M.: Tularemia. *Paul B. Hoeber, N. Y.*, 1929.
8. Crawford, M.: Tularemia from the ingestion of insufficiently cooked rabbit. *Jour. Am. Med. Assn.*, 99:18, 1932.
9. Foulger, M., Glozer, A. M., and Foshay, L.: Tularemia. *Jour. Am. Med. Assn.*, 98:12, 1932.
10. Francis, E.: Tularemia—Cecil, R. L., *A Text Book of Medicine*. W. B. Saunders Co., 1931.
11. Francis, E.: Tularemia—The DeLamar Lectures, 1926-1927. *Williams & Wilkins Co., Baltimore*, 1928.
12. Foshay, Lee: *Jour. Med.*, 15:186, 1934. *Year Book of General Medicine*, 1934.
13. Smith, E. F.: *Delaware State Med. Jour.*, 1931. *The Practical Medicine Series, General Medicine*, 1932.
14. Foshay, Lee: Serum treatment of tularemia, *Jour. Am. Med. Assn.*, 98:7, 1932.
15. Fisher, W. S.: *Jour. Indiana State Med. Assn.*, 1933. *The Practical Medicine Series, General Medicine*, 1933.
16. Simpson, W. M.: *Ohio State Med. Jour.*, 1933. *The Practical Medicine Series, General Medicine*.
17. Bate, R. A.: *Clin. Med. and Surg.*, 41:24, 1934. *Year Book of General Medicine*, 1934.
18. Baer, H. L.: *Arch. Dermat. and Syph.*, 28:557, 1933. *Year Book of General Medicine*, 1934.

## DISCUSSION

Dr. A. E. Fossier (New Orleans): Dr. Perret has really given us quite a treatise on infectious tularemia and to my mind it is as able a paper as I ever read on the subject and he deserves a great deal of credit for the large amount of work and research he has gone through in order to bring the matter to our attention.

I agree with Dr. Perret that there is much more tularemia in the state than is recognized. The symptoms are so closely associated with those of other conditions that a mistaken diagnosis is justified, especially where there are not the facilities of a laboratory where the agglutination test can be made.

We know that tularemia, as Dr. Perret told you, is named after a county in California, which is a lake county where there is a lot of bullrush. The county has been named after the bullrush and called "Toley" or "Tulare". Now, the interesting part about this is that California has the very same bullrush we have here in the southern part of the state. California and Louisiana are recognized as the two states that have that particular bullrush, so although tularemia was first discovered in California, we have the same topographical relationship.

The large number of cases brought out is interesting. Sixty-nine cases that are positive cases without any doubt, as the diagnosis was made on the agglutination test. This study of sixty-nine cases is especially interesting for the reason we had here in New Orleans the lowest death rate found anywhere else. Dr. Perret tells us the death rate was 1.4 per cent against nearly 4 per cent for the rest of the country. What the cause of this is, I do not know, whether they have been better treated by Charity Hospital and Dr. Perret than elsewhere, or whether the disease is milder here, I am not able to say at this time.

The only thing, I am sorry that Dr. Perret, and this is only a matter of suggestion, has not taken the 192 cases reported by the State Board of Health and made a study as to the geography, relative to where the disease was found, whether in marshy regions, what region predominated, though this



would take a lot of work, it might add to the knowledge of the disease.

The diagnosis is difficult. We have only one thing that makes the diagnosis positive and that is the agglutination test. We cannot rely on anything else in known laboratory methods, blood test, urinalysis, or anything else.

Now about types; just a short while ago an article appeared in which the pneumonic type of tularemia is mentioned, and two cases were reported with positive agglutination. As a rule these cases are fatal. One died in thirty-two days and the other very shortly after. The pneumonic type must be taken into consideration. If a man shows any symptoms of lung condition it is probable the tularemia is of the pneumonic type.

We have no specific treatment. It is claimed the best results have been with antiserum and all attempts with vaccination have been abandoned.

As to the question of prophylaxis, I think the disease can be prevented if the proper precaution is taken when hunting wild rabbits, also handling rodents. I do not know whether muskrats have been proved to bring about tularemia. In this part of the country where so much trapping goes on, there may be some tularemia caused by muskrats. I think the only way we could bring people who come in contact with wild rabbits to be careful would be if on their hunting licenses the admonition of the U. S. Government were printed, in regard to using gloves and being careful when cleaning rabbits. I do not know what we are going to do about this matter, but I think we can pass a resolution to have it sent over to the House of Delegates as a recommendation that the State License Bureau put this admonition of the U. S. Government on hunting licenses.

It has been a pleasure to listen to the paper of Dr. Perret. I think a lot of tularemia is overlooked here in New Orleans no doubt as well as in the Parishes.

Dr. Dan Kelly: I want to thank the committee for inviting this doctor to read the paper on rabbit fever. My attention was called to it three or four years ago by Dr. Williams of Monroe and since then I have had six or eight cases in one summer. It is my opinion that rabbit fever among the poorer classes to-day is one of the most important diseases we have; we are just overlooking it.

I had one case come to me with bubo. I examined it to see if it was due to something else. I asked if he had an ulcer anywhere, and he answered on his hip. I examined that and found he had been bitten and infected by a tick.

My cases are evidently a little more severe than most of the cases I have heard the doctors talk about. In all my cases, the glands abscessed, and the patients were very, very sick. One of the last cases I had was a lady who was passing along

the road after a rain and pricked her finger with a thorn, went home and helped her brother dress some rabbits, and came down with tularemia. About two years ago, I had six or eight cases, but I just see it occasionally now. I think it is a very important disease and the most important disease we see among the poor. This disease is very prevalent in this state and especially amongst the poorer whites and negroes on the farms.

Dr. S. Chaille Jamison (New Orleans): I regret I did not hear the paper, but I have had one or two experiences with tularemia that have helped me so much that I would like to hand them on to you even at the risk of being prolix.

In the first place, what Dr. Kelly said has happened to me in the past. I remember very clearly some ten or twelve years ago one of the students took me to a bedside in a negro ward and asked, "Doctor, what do you think about that epitrochlear gland, isn't it very large?" Well, it was very large. In fact, I have never seen a gland quite as large. I told this individual that I did not know exactly what it was, some type of adenopathy. We incised that gland, drained a little muco-purulent material and the negro left the hospital.

My experience in my ward where we have tularemia very commonly is that it is not an extremely serious condition. The majority of them get along quite well on symptomatic treatment. So far as I know, specific treatments are not satisfactory.

Now, I want to relate another experience. I had an individual admitted to my service with enlarged cervical glands, large axillary glands, especially marked cervical glands, and these were matty and adherent. I thought the patient had tuberculous adenitis, however, blood agglutinations gave positive agglutinations for tularemia. I went before a class and demonstrated the patient as an example of cervical adenitis due to tularemia—a little against my convictions, I say it myself, admitting the possibility of tuberculous adenitis, in spite of the agglutinations in fairly strong dilutions. As time passed it became obvious that this individual not only had tuberculous adenitis, but tuberculosis of the lungs, and he succumbed to tuberculosis.

The point I want to make here is that the agglutination test means very little. I have that experience commonly. It means apparently a lifetime immunity. In the majority of instances the person has immunity for a life time, therefore, it does not mean the patient is infected by clinical tularemia.

Dr. Saul F. Landry (Houma): I have enjoyed the paper very much because I am from a section of the country where tularemia is prevalent.

Answering Dr. Fossier's question, I believe the muskrat carries the infection. I have had many

cases from trappers who gave no history of dealing with any animals but the muskrat.

The disease is usually mild. I noticed one particular thing about it which I thought characteristic, that is that the glandular suppuration which comes after the disease has more or less subsided, the pus from the tularemia gland, I thought peculiar to the disease. It is usually sulphur yellow and has a characteristic odor. I incise a great many and suspect the disease when I get a soft and enlarged gland with thick yellow pus which has a rather characteristic odor.

Dr. Arthur A. Herold (Shreveport): I am sure all of us have seen a great many cases of unsuspected tularemia, looking back on patients in the past and recognizing the condition. The first case which I saw that I am now positive was tularemia was undiagnosed. The gentleman lived ten miles from my home, had a lesion on his finger and remarkably large epitrochlear gland, temperature 101° to 103°, with a history of having skinned rabbits. At that time I had not heard of tularemia and immediately decided he had a streptococcal infection. I gave him two injections of antistreptococcal serum intravenously on the first and third days and he showed improvement almost immediately, and after two or three weeks claimed he was all right. I do not say he was cured by the serum, but whether it gave the necessary antibodies or whether he had a complicating streptococcal infection with the tularemia are questions of probability.

I have recently seen a case of the typhoid type which is making a gradual recovery. That shows it is well distributed throughout the State. This lady did not handle any wild animals and picked it up probably with domestic animals.

Dr. J. M. Perret (In conclusion). I want to thank the gentlemen who discussed my paper. Doctor Fossier asked me whether muskrats could spread the disease. In the sixty-nine cases studied, none were due to the muskrat, but I am glad Doctor Landry answered your question, saying he had seen such cases in his part of the country. The rabbits that we get over here and buy at the market come from Missouri.

The Public Health Service says that 1 per cent of the rabbits are infected, so when we see thousands of rabbits on the open market we can figure 1 per cent have tularemia.

As to geography, I know rabbits have been found infected near Kenner and at Little Woods, Louisiana.

The doctor brought out the question of lung conditions. In a late issue of the A. M. A. Journal, March 1935, Archer, Blackford and Wissler of the University of Virginia, showed that as demonstrated by roentgen examination definite pulmonary changes are present in a high percentage of

tularemia cases, and that peribronchial thickening is frequent in patients recovering from the disease. If we use the roentgen ray routinely on cases we have in the hospital, we shall be surprised at the number of cases with pulmonary lesions.

Doctor Kelly said the subject of tularemia was important among the poor people because lots of poor people go hunting and get rabbits, and the poorer they are the greater is the necessity for them to get rabbits to use as food.

As to Doctor Jamison's remarks about the positive agglutination reaction, we have to use discretion in the evaluation of the positive agglutination test. A case has been reported where the agglutination test was positive after twenty-four years. A patient may have had tularemia years previously and there is no reason why he should not have tuberculosis, syphilis, or some other disease at a later date. In such cases we must use our knowledge of differential diagnosis.

As far as the mortality of the cases is concerned, it is not high, but the morbidity is high. The patient with tularemia is very sick, and for months may be unable to work. The morbidity, therefore, is pretty high and the patients suffer much pain. All the glands become very much enlarged, many to the size of a hen's egg or larger.

As to treatment, I have mentioned already that it is symptomatic and that the serum so far is in the experimental stage and not yet on the market.

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## THE INCREASING CALL FOR THE MODERN TREATMENT OF FRACTURES OF THE SPINE\*

EDWARD S. HATCH, M. D.  
NEW ORLEANS

The diagnosis of fractures of the spine is being made much more frequently each year, and cases which were called "sprained" or "wrenched backs" in the past, often from comparatively trivial injuries, are now recognized as fractures of one or more vertebral bodies.

I shall speak today only of spinal fractures without cord symptoms, which, in my experience, represent about 70 per cent of these fractures. The increased interest in spinal fractures is due, I feel sure, to the fact that this diagnosis is made much more frequently of late due to the making of very careful physical examinations, and to increasingly better roentgenograms.

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\*Read before the Louisiana State Medical Society, New Orleans, April 29-May 1, 1935.

One need only to read the daily papers to see how much more frequent automobile accidents are than they were, say, 10 years ago, and a certain per cent of these accidents must, of necessity, mean spinal fractures.

For the last 10 or 15 years, I have taught the importance of lateral spinal roentgenograms in all cases of back injury. One should never be satisfied with an anterior posterior view alone, as it is much more difficult to diagnose slight cracks and compression fractures of the vertebral bodies in the antero-posterior than in the lateral view. It is wise to take roentgenograms of the entire spine; as it not infrequently happens that fractures are found at different levels than the one at first suspected.

The weakest part of the spinal column is the space occupied by the last two dorsal and the first two lumbar vertebrae. Here the normal kyphotic curve of the dorsal region is reversed into the normal lordotic curve of the lumbar region. That explains why we most frequently find spinal fractures in this region. The cervical region comes next, and here we find fractures and fracture dislocations quite frequently.

J. T. Watkins says: "The key to diagnosis is suspicion." When a patient has been forcibly doubled up, or he has fallen some distance, landing on his feet or his buttocks, he has a broken back until you prove he has not. Spinal fractures are often caused from trivial injuries, such as sitting in an automobile, or other moving vehicles, when the knees are flexed and body extended, the body is then bent forward suddenly, as in hitting a bump or being suddenly thrown up then dropped back onto the seat.

Let me speak for a moment of Kummell's disease. This doctor's first article appeared in 1891, and he described his cases with spinal symptoms as the result of unrecognized and further untreated fractures. It is fair to say that this was before the days of roentgen ray, and many years before the importance of lateral roentgenograms was recognized, so that many of his cases were, undoubtedly, unrecognized fractures. It is doubtful if Kummell's disease is an entity.

Even after the diagnosis of fracture of the spine is made, I am sure that some surgeons feel that rest in bed, or on a frame, is all the treatment that is necessary. As an illustration of this fact, I heard one of our best Louisiana general surgeons make the statement two or three years ago that he treated his spinal fractures in that way, because he believed nothing more could be done for them. This is, to say the least, a sad commentary on the modern treatment of this not uncommon injury.

When a fracture of the spine is suspected, first-aid and the transportation of the patient to a hospital must be thought of. The avoidance of all trauma or any manipulation that might increase compression is best handled by keeping the patient in the prone position; he never should be allowed to stand or even to sit up. Examination at the hospital will usually disclose some tenderness at the fracture site, and pain on spinal motions. Roentgenograms, antero-posterior and lateral views, of the whole spine are then made. We often find more than one fracture; therefore, as stated above, it is the part of wisdom to take roentgenograms of the whole spine at first, and be sure that your pictures are good enough to show the detail of bone structure, so that if you do not find a fracture by roentgen ray examinations, you can safely rule out that diagnosis. However, Feaster reports that in three cases he found no evidence of fracture of the vertebral bodies immediately following the accident, but in roentgenograms made ten days to three weeks later he found definite compression.

Stallard also speaks of this possibility, but says: "Fortunately, these latent fractures are rare." He found one case in a study of 301 definite spinal fractures.

This illustrates just how careful we should be in getting perfect roentgenograms, because while it is entirely possible that the vertebral body being composed of cancellous bone may be injured, and later distorted, by weight-bearing, it is also possible that in a roentgen ray examination that does not show perfect bone detail a crack may be easily overlooked.

Many papers have been written on spinal fractures, and a large number of cases re-



ported. It now seems to be very well proved that rapid hyperextension is the method of choice in the treatment of these fractures. Davis, in 1929, wrote a very interesting and comprehensive paper on this method. In his paper he showed that the great strength of the anterior common ligament plus the firm attachment of the intervertebral discs, and the strength and resistance of the lateral body masses make hyperextension the ideal treatment. As more and more of these cases are being reported, the literature of cures is steadily increasing.

Rogers, of Boston, a year later described a flexible frame in which he secured gradual reduction of the deformity with very good results. Now he hyperextends his patients rapidly while they are under the influence of morphine and scopolamine. He does this in 15 or 20 minutes.

Dunlop and Parker reported at the meeting of the American Orthopedic Association, in 1933, a somewhat more radical procedure, in which they anesthetize the patient, and while extension is being made on the arms and legs, hyperextension of the spine is done suddenly by means of a sling around the patient who is then let down onto the arched bars of a Goldthwait frame, position checked by roentgen ray, then a body cast is applied. The after treatment is conventional. They report some perfect results, and while I believe their method is perhaps the best, I have not used this technic up to the present time. There have been many other methods of rapid hyperextension introduced, even to careful hammering at the fracture site while the upper part of the patient's body is fixed to a table in the prone position, his legs elevated, which position hyperextends the spine in the reverse manner. A large number of surgeons still prefer the gradual technic first introduced by Rogers which gives excellent results.

We have been using, for some time, a modification of the Rogers' method, most of the time with an anesthetic, occasionally without. The frame we use is one introduced by Walter E. Johnson, which is a light-weight modification of the Goldthwait frame, and can be carried about if necessary.

Different lengths of light thin steel bars are used which are flexed by a thumb-screw. The procedure is as follows: A felt pad is placed over the bars which are in slight hyperextension. The patient is placed on the bars, after being anesthetized, and while assistants hold the patient's legs and arms in extension, his spine is rapidly hyperextended with a thumb-screw, the apex of the hyperextension being at the site of fracture.

If possible, and we are usually able to do this, a lateral roentgen ray is made to check up on our correction. When we are satisfied with the position, a plaster cast is applied including the steels, as is done on the Goldthwait frame in cases of spinal tuberculosis.

When the plaster has set, the steel bars are removed, and the patient is placed in bed. They are usually very comfortable; however, care must be taken to avoid gas distention by diet or enemas. If everything goes well, this cast remains on 10 or 12 weeks, the patient being recumbent during that period. During most of this time, exercise for the legs and upper trunk are used, after the method of Boehler, so that when the plaster jacket is taken off the patient is in good general physical condition. A Taylor back brace is then designed and fitted which is usually worn for from six to nine months. Many of these patients begin light work in one or two months after the brace is applied.

How different is the outlook now for our patients than that of a comparatively few years ago, when a broken back meant prolonged hospitalization, permanent deformity, and practically always some permanent partial disability.

In fractures of the cervical region which, in my experience, are the next most frequent, the treatment is quite different.

Here more conservatism is necessary. These cases are often caused by diving into shallow water or in football injuries. Many of these fractures are accompanied by spinal cord injury. These latter we will not have time to go into in this paper. If these fractures, without cord symptoms, are accompanied by dislocation, reduce the dislocation under an anesthetic, and then treat the fracture. These fractures are best treated by head extension. Have a well-

fitting halter made, adjusting it to the patient's head while he is lying on his back in bed, the head of the bed being raised 18 inches; a weight and pulley is used attached to the halter to get extension. After a few days in bed, pain and muscle spasm are usually relieved. I like to keep these patients in extension for three to four weeks, and then very carefully apply a plaster jacket, including the head, so that the fractured vertebrae are held perfectly while the patient is up and about. Healing is usually complete in eight to ten weeks.

As we are now treating fractures of the spine with the fundamental principles underlying the setting of other fractures, the injured patient can hope for a return to active life with very slight, if any, residual pain. We can assure these patients that they will not be at all incapacitated, and that they will be as strong and active as they were before the accident.

#### CASE REPORTS

Case 1. Miss D. R., was seen in consultation on April 1, 1934, having been examined in the hospital emergency room very early in the morning of that day. She was riding on the back seat of an automobile when they were struck by another car turning their car over. She immediately experienced severe pain in the dorso-lumbar region. These pains radiated down both legs. A fracture of the lumbar spine was suspected. The first time I saw her I had antero-posterior and lateral roentgen rays of the spine made which showed a compression fracture of the first lumbar vertebra. The patient was so uncomfortable that I kept her in the best possible position hyperextended in bed with adhesive plaster strapping for about five days, until the shock, referred pain and distention had practically subsided. Then, under an anesthetic, I applied a plaster jacket on the Goldthwait frame with very good correction. She made an uninterrupted recovery. I sent her home in the plaster jacket which she wore for a few months with comfort, after which I designed and applied a Taylor back brace which she wore with equal comfort. She made a complete recovery, and is now back at work finishing her course as a student nurse.

Case 2. Master D. C., was kicked in the head by a horse on August 10, 1934. He was never unconscious. He was seen at once by the family physician who suspected a cervical spinal fracture on account of rigidity of the patient's neck, so roentgen rays were made. The child was brought to me August 15 on pillows, never having been allowed to raise his head. Several roentgen rays were made which showed an undoubted fracture

of the odontoid process with very slight displacement. I immediately placed this patient in bed with head extension where I kept him for nine days. At the end of this time I applied a plaster jacket including the head. The patient made an uneventful recovery. The jacket was removed on October 9 and he has not had the slightest trouble since the accident.

Case 3. Miss G. C., came for opinion on August 14, 1934, having been thrown from a horse one year earlier. Roentgenograms were made at the time, and she was diagnosed as a case of sacroiliac strain and advised to go to an osteopath. Luckily, she did not follow that advice. She remained in bed for five weeks; got up at the end of that time, but the pain still persisted. She tried to get about, but suffered so much that about a year after the accident she came for examination. On examination a slight kyphosis was found in the lumbar region, which, with the history of the accident, was very suspicious of fracture. Roentgenograms, antero-posterior and lateral, proved the diagnosis of compression fracture of the second lumbar vertebra. The patient is a very intelligent woman, and her comment was, after she had been told what her trouble was, "that she always thought something serious had happened." A modified Taylor back brace was designed which relieved her pain. She is now comfortable, and is actively at work as a school teacher.

Case 4. Mr. W. L., was seen in consultation March 18, 1935, giving a history of having fallen from a tree on March 15, when he suffered a Colles' fracture of the right wrist, and a spinal injury. Roentgenograms showed a compression fracture of the twelfth dorsal vertebra. The patient complained of a good deal of pain and discomfort at the site of fracture, but practically no referred pain. On March 18, under ethylene ether anesthesia, a plaster jacket was applied on the Johnson frame with very good correction. A roentgen ray was made before the plaster jacket was applied. The day following the application of the jacket, the patient was so very uncomfortable from distention, that he threatened to remove the jacket. After a good deal of persuasion, his family doctor convinced him that the jacket should be left on. Several days later the patient was very comfortable. He is still wearing the plaster packet.

#### BIBLIOGRAPHY

- Davis, Arthur G.: Fracture of the spine. *Jour. Bone & Joint Surg.*, 11:133, 1929.
- Lester, B. S., et al: Further modification of convex adjustable Bradford frame. *Jour. Bone & Joint Surg.*, 15:1020, 1933.
- Robertson, R. C.: Fracture of body of vertebrae. *Jour. Tenn. Med. Assn.*, 26:469, 1933.
- Thomas, A., and Sevier, C. E.: Corrective treatment of compression fractures. *Colorado Med.*, 30:252, 1933.
- Haughton, W. S.: Treatment and transportation of fracture of spine. *Brit. Med. Jour.*, 2:744, 1933.

- Watkins, J. T.: Fractures of spine. Calif. & West. Med., 39:246, 1933.
- Sunderland, F. V.: Compression fracture. U. S. Nav. Med. Bull., 31:347, 1933.
- Dunlop, J., and Parker, C. H.: Correction of compressed and impacted fractures of vertebrae. Jour. Bone & Joint Surg., 15:153, 1933.
- Penn, J.: Simple method of applying body cast. Jour. Bone & Joint Surg., 16:205, 1934.
- Patterson, R. F.: Use of modified hospital bed for treating fractures of spine. Jour. Bone & Joint Surg., 16:207, 1934.
- Ryerson, E. W.: Automobile jack for fractured spine. Jour. Am. Med. Assn., 103:562, 1934.
- Feaster, O. O.: Delayed appearance of deformity in vertebral body fractures. Jour. Am. Med. Assn., 102:596, 1934.
- Bowler, J. P., and Giles, J. F.: Compression fractures of vertebral bodies. New England Jour. Med., 210:1062, 1934.
- Rhys, O. L.: 270 cases radiologically considered. Brit. Med. Jour., 1:655, 1934.
- Cato, E. T.: Treatment of crush fractures. Australian and New Zealand Jour., 3:351, 1934.
- Tucker, J. T.: Latest development in treatment of fracture of spine. Virginia Med. Mo., 61:154, 1934.
- Battalora, George C.: Compression fractures of the vertebrae. N. O. Med. and Surg. Jour., 87:609, 1935.
- Stallard, C. W.: Fractures of the spine. South. Med. Jour., 28:206, 1935.

#### DISCUSSION

Dr. Guy A. Caldwell (Shreveport): Dr. Hatch has brought a very important subject to us, and has covered it very thoroughly. I think everyone who is handling and seeing many of the spinal injuries at this time is in thorough accord that in the first place roentgen rays, and careful roentgen rays, are essential to make the diagnosis, those to include lateral films. In the second place, after having recognized it, in a great majority of cases hyperextension is the method of correction, and this position of hyperextension should be maintained by the application of a plaster in the trunk portions and by the use of weights and pulleys with the neck hyperextended in the cervical portion.

This is unquestionably a move which has given us better results than we had before. I am perfectly willing to grant that very excellent functional results were obtained in many fractures, in the old days before this treatment was done, but, on the other hand, there were a great many of those cases which did suffer pain, and continued pain for years afterwards, either because the fracture line caused displacement of the articular facets, or because fusion was incomplete or because the trunk posture and the mechanical strain and stress on all of the supporting ligaments were altered. Unquestionably the results are better when we correct the alignment and the position.

I should like to show two or three slides which carry out and show the technic which Dr. Hatch has outlined in the application of the plaster and the correction of some of these cases.

(Slide). Here is a brief review of the cases

at the Charity Hospital in Shreveport, over a number of years. This shows that the amount of permanent paralysis is most common where the lesion is most common, namely, lower dorsal in the upper region, and in the upper cervical region.

(Slide). Of interest is this old picture taken from Stimson's text book, showing that hyperextension was used and recognized by him as being essential before the days of roentgen ray being employed to recognize the fractures. We have come back to it in late years.

(Slide). This is the Goldthwait frame, which is the basis of the apparatus that is used for the correction of these fractures in the lumbar region.

(Slide). The principle, as Dr. Hatch outlined, depends on the integrity of the anterior ligament, and particularly the short interclavicular ligament.

(Slide). This is a modification of the Goldthwait frame. There is the thumb-screw which pushes the two supports together and increases the extension.

(Slide). This is the patient lying on the frame, under morphine and scopolamine for anesthesia.

(Slide). The gradual hyperextension, at which time a roentgen ray could be made to check the position.

(Slide). The application of the jacket with the posterior part, being sure that the anterior portion extends over the pubes.

(Slide). I have been a little later in the matter of exercise of patients. Toward the end of the first week, as soon as they are comfortable, we allow them to sit up. Those cases should be selected, with some care. A great many of them can be permitted to do so, and as far as I can judge, the end results are just as good.

(Slide). There is a roentgen ray before and after reduction on a patient.

Dr. Edward S. Hatch (New Orleans): I am glad that Dr. Caldwell showed some pictures of this frame which we are using that was designed by his associate, Dr. Johnson, and I believe all of you would be pleased with it.

As the time is very short, I did not report my cases, or show any slides. One important thing which we all noticed in the early days, when spinal fractures were not treated by hyperextension as much as they are now, was nerve-root pain. These patients improved, got back to work without paralysis, but many of them suffered from spinal nerve-root pain. Then pain in the upper and lower abdominal regions often was quite marked. While it did not prevent their going back to a gainful occupation, it did cause them pain and made them unhappy, but with the modern treatment of fractures of the spine we have very little of this with which to contend.



## DEMENTIA PRECOX\*

H. R. UNSWORTH, M. D.†  
NEW ORLEANS

The problems of mental disease are considered under two headings: the psychological and the physiological. The psychological conception treats the phenomenon as a state of mind, while the physiologists believe that the manifestations of a psychosis are due to changes in the brain.

This paper will not attempt to discuss the psychology of insanity, but will endeavor to encourage the physiological and biological aspect as regards mental disorders in general, and specifically dementia precox.

There is no question but that it is impossible to have a purely psychic illness or a purely physical one. After all, illness is but a living event taking place in a living organism which is itself alive only by virtue of the fact that the psychic and somatic are a harmonious unit.

All biological teachings hold that the important point is not to regard the cell as an isolated or independent unit, but to consider the individual as a whole. Biologists agree that as long as cells remain in continuity they should be regarded as only specialized centers of action into which the body resolves itself, and by which means the physiological division of its functions are effected. This being true of the cellular and physiological elements of the organism, it seems reasonable to assume that any alteration in the psychic field will bear a direct relationship in its effect on the patient as a whole, and that it is truly impossible to say that any mental disorder including dementia precox can be explained on psychopathology alone.

Dunbar states that all medical problems should be studied and treated from the view of psychosomatic interrelationship. Modern medicine in general is keeping away from specialization, and does not consider diseased organs alone, disregarding the personality.

In caring for a large number of mentally sick in a psychopathic hospital, many of them

having been admitted with a diagnosis of dementia precox, prolonged observation and study have proved the diagnosis in error, and a toxic or symptomatic condition was established, and clinically it was impossible to differentiate the psychic symptoms from those of the true precox. In all instances in which the diagnosis of toxic or symptomatic psychosis was made, the clinical laboratory findings substantiated the clinical diagnosis. In other instances, departmental medical pathology accounted for the cause of the mental disorder.

It will be recalled that the text books under the heading of dementia precox give five subdivisions, each of these considered to have certain mental symptoms belonging to a specific group. It is difficult for me to admit that any syndrome having a common pathology could express itself into illnesses whose symptoms differ so vastly, and in which the prognosis differs. Certain endocrine disturbances, post-obstetrical toxemias and pre-convulsive mental states, are in some instances identical with the psychic symptoms of dementia precox. Sometimes a period of months elapse before the true nature of the mental illness is established. In one instance, in a case at the De Paul Sanitarium, a generalized convulsive seizure terminated the psychosis which had simulated at all times the heberphrenic type of dementia precox.

Stransky states that the basic factor in the symptomatology of dementia precox is intrapsychic ataxia, which term means a disturbance of coordination between the intellectual attributes of the whole psyche and the affective attributes. Beuler admits the existence of intrapsychic ataxia, but thinks that it is only one expression of what he terms, "splitting of the psyche". Wolfsohn, in studying the hereditary factor in the cause of dementia precox, reported that of 2,215 admissions to an asylum at Zurich 90 per cent could be traced to an hereditary taint, but could not definitely state that heredity itself was responsible. Von Monakow advances the theory that the choroid plexus fails in its function as a selective filter for the products of metabolism and endocrine secretions due to degenerative changes in the plexus. He also states that emotional upsets and strong passions maintained for long periods

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made demands upon the plexuses that they could not measure up to. White states that there are many exciting causes, such as severe hemorrhage and infections, which precipitate the symptom-complex of dementia precox.

It is immediately obvious that the etiology of this mental disease is questionable. Certainly the physiological alterations due to emotions over prolonged periods or toxemias of any description, would produce a clinical picture psychically identical with that given as constituting the disease dementia precox.

The psychosis dementia precox is essentially a disease of the period of puberty and adolescence. In taking the histories of such patients it is common to find that they have been rather dull through their youth and have had difficulties in their school work. There is, of course, an occasional exception to this rule.

#### CASE REPORTS

Case 1. Mrs. H. L. was admitted to the De Paul Sanitarium April 2, 1935. At the time of her admission she had been considered a case of dementia precox, and the family had been advised to send her to the East Louisiana Hospital for the Insane, because the physician who had treated her had declared that she would not get well. Twenty-four hours after admission to the Hospital, examination revealed that she had a strawberry tongue, loose and offensive bowel movements and the epidermis over the knuckles showed definite pigmentation. The medical history revealed that she had never been sick mentally before, but that two members of her family, aunt and uncle, had been insane. The final diagnosis was pellagra with psychosis, and at the present time the patient is well on her way to recovery.

Case 2. Miss M. McG. was admitted to the De Paul Sanitarium January 7, 1935 at which time she was twenty-nine years of age. She was a graduate of a University and had never showed any previous mental illness. She was also a graduate nurse. The admitting history was to the effect that she was suffering with a severe pruritis, and that she had become hallucinated, running out in the halls of the General Hospital, where she had been a patient, answering to her hallucinations. The opinion given by the physician referring the case was to the effect that she was medically and serologically negative, and that it was his belief that she was a case of dementia precox. After a period of observation and study the patient was found to have a B.M.R. of minus 39 and a spinal fluid Wassermann 4 plus. After receiving treatment for her hypothyroidism and cerebrospinal

syphilis she was discharged in the care of her relatives February 3, 1935, as completely adjusted mentally.

Case 3. Mr. T. P. was admitted to the De Paul Sanitarium June 15, 1934, a graduate of public high school, and was perfectly well until the year of 1931, at which time he became depressed and destructive. He was admitted to the State Hospital of Alabama in 1931 and was diagnosed as dementia precox. At the time of his admission to the Sanitarium here he showed evidences of a chronic physical illness. A skiagraphic study revealed that he had an active pulmonary lesion, tuberculous in character. Spinal fluid Wassermann at this time was returned 4 plus. After being treated for his pulmonary tuberculosis and cerebrospinal syphilis, he was returned home and made a fair adjustment for a period of a couple of months. He was thereafter readmitted to the De Paul Sanitarium in active psychosis and died with tuberculous pneumonitis.

#### CONCLUSION

It is my hope that the profession in general will give profound consideration to the patient presenting symptoms suggestive of dementia precox. Every available means should be used to explain the cause of his mental sickness before he is labelled dementia precox.

#### DISCUSSION

Dr. J. D. Young (Shreveport) I want to congratulate Dr. Unsworth on his complete presentation of this subject. However, I think that psychiatry falls down in a good many respects. Take your text books on psychiatry and look up the definition of dementia precox and see what you get. Definitions in psychiatry are too abstract, not concrete, deal in generalities a little bit too much.

Dr. Unsworth brings out the fact that in treating dementia precox or any type of psychosis it is essential that you consider the individual as a whole and not attempt to separate the nervous system from the somatic, which is correct. Man must be considered as consisting of dynamic energy systems and man's reactions must be considered in turn in terms of dynamic energy. A man's personality must be ever changing to meet the ever changing demands of environment. Of course, certain types of individuals are unable to adjust themselves to this changing environment and then develop certain defensive types of mental reactions. Kraepelin stated that if a case is diagnosed as dementia precox and recovers, the diagnosis is wrong. Of course, I do not believe that we exactly agree with Kraepelin to-day, because we do know certain types of dementia precox make a recovery or have remissions. Dr. Unsworth's

paper is a plea to be a little careful in labelling these as cases of dementia precox when there might be some other cause for this condition. I agree with Dr. Unsworth. Toxic infectious conditions may manifest themselves as dementia precox reactions or schizophrenic reactions but are not true cases of dementia precox.

Dr. Unsworth said he could not conceive that dementia precox in its five divisions could have one etiologic base. I do not know that I agree with Dr. Unsworth regarding this because you can have pneumonia and have five different types of pneumonia, and I think probably we can have five different reactive types of dementia precox caused by the same etiologic factors. I do not know. As to the cause, we have Adler's theory of inferiority complex, Freud's theory, Jung's theory, and many other theories. Dementia precox once labelled on to an individual is rather hard to remove, and I agree with Dr. Unsworth that we should be careful in the diagnosis of dementia precox.

Regarding the different types of treatment of dementia precox and reactions that might occur, in 1922, I experimented in cases of dementia precox using auto-serum made from patients, injected intra-spinally, on the theory that the choroid plexus was at fault. I used that same basis in research work in cases of epidemic encephalitis.

I still believe Dr. Unsworth is right that dementia precox is something different from schizophrenic reactions resulting from some toxic cause.

Dr. L. L. Cazenavette (New Orleans) I believe I am conservative when I say that over 50 per cent of cases in mental hospitals fall in the group of dementia precox. We meet these patients in hospitals after tragedies have occurred, in other words, when the family thinks, and the friends of the patient realize that it is time to put the patient somewhere in order to prevent any further ravages. This percentage compared to the percentage of patients who are precox, but not in the sense that they are actively disordered from the essential point of view, is really a very small percentage of those who really belong to the group of what we might call precox trend. Let me make myself a little more clear. An individual may have what has been accepted as a schizophrenic type of mental reaction, but he does not become schizophrenic, not actually mentally diseased, until it has increased to such a point that it is beyond his own control. In exactly the same way an individual may be of the manic type, may be excitable, may be easily excited by nothing at all, but he does not become a maniac until the disease has

actually made more pronounced involvement of his mental condition.

I believe that the fact there are so many patients presenting disorders along that line renders any discussion of the subject very much in order, and I think the presentation of the subject by Dr. Unsworth is a very good one. He tends—if I get it right—to differentiate what we commonly call precox condition from some definite groups or individuals not really in the group. Of course, the fact is we do not know definitely what dementia precox is. We study the reactions of these persons for the purpose of study and group according to reactions, but groupings of disease are merely a help to us for the study of these patients. The diseases themselves have no particular rule. One man may show particular symptoms and another man show other symptoms, and yet belong to the same group of disease.

I do believe what Dr. Unsworth has brought out in his paper is worthy of attention and it simply makes us more careful as to the diagnosis of these cases. We have to consider not only the mental condition of the patient but the physical and other conditions of the patient as well before making a diagnosis of dementia precox.

Dr. Roy Carl Young (Covington) I have enjoyed the paper of Dr. Unsworth very much. He brings out the very important fact that every case of mental disease should be studied as a whole, every case of mental disease should be given a thorough and complete examination and everything cleared up so far as the individual is concerned. I agree with Dr. Unsworth in wanting to limit the title of dementia precox to a smaller and more definite type of mental reaction. For instance, a case is sent in with a diagnosis of dementia precox and found to have cerebrospinal syphilis. The cerebrospinal syphilis is treated and the dementia precox cleared up. Primarily, the man was a case of cerebrospinal lues, symptomatically, a precox.

I think Dr. Unsworth's paper is very timely. Every one of these cases has to be given a thorough check over.

We have at the Fenwick Sanitarium in Covington a case similar to the one reported by Dr. Unsworth. This case clinically is one of dementia precox but further study of the spinal fluid proved conclusively that it was chronic epidemic encephalitis with a precox symptomatology.

Dr. H. R. Unsworth (In conclusion) It has been my observation that too many patients with hallucinations and delusions are diagnosed dementia precox. A great number of these patients are later definitely found to be sufferings from a toxic psychosis.



## TREATMENT OF ACUTE HEAD INJURIES\*

RAWLEY M. PENICK, JR., M. D.†  
NEW ORLEANS

For the want of a more exact designation, the term head injury is used to denote the traumatic lesions of the cranium and contained portions of the central nervous system. These injuries challenge our attention today as never before because each year brings an increasing number of these unfortunate accidents. It is also true that a good deal of disagreement exists as to the treatment of these cases. The object of this communication is to discuss certain procedures now in use, and to draw some conclusions as to their usefulness.

As you know the viewpoint on head injuries has varied from time to time. For years the fracture of the skull monopolized a major part of the physician's attention, but in recent years the effects of increased intracranial pressure have become better understood and this increased tension has been the point on which most of the therapeutic measures have been focused. No doubt, this is a wholesome advance, but I believe we should go a step further, and, without disregarding the effects of pressure, take into consideration those factors which are directly responsible for the increase in pressure, in other words, brain injuries. Therefore, to be complete, any attack on this problem must be directed at these lesions even though, in certain instances, our therapeutics assumes a negative character. As a direct attack is often impossible, most of our treatment is directed toward the management of increased pressure. It would seem wise, however, to avoid those procedures which might at the same time aggravate the existing intracranial damage.

The lesions which can cause death *per se* or through the production of increased pressure are:

1. Concussion.
2. Edema.
3. Hemorrhage.

4. Contusion of brain tissue.

5. Laceration of brain tissue.

Exact data on the occurrence of these, following trauma, are comparatively meager. However, Vance's<sup>1</sup> series, in which he reports the autopsy findings in 507 cases, is an excellent source of information. This author found that 27 per cent died of concussion, death occurring within 10 hours. Hemorrhage played a definite part by causing compression of the brain in 38 per cent of the entire series. This figure is obtained by excluding small hemorrhages which Vance thought played only a minor role in producing the fatal outcome. Extradural hemorrhage large enough to cause serious symptoms was present in 12 per cent of the cases. Contusions and lacerations, often associated with hemorrhage, were frequently encountered. LeCount and Apfelbach<sup>2</sup> reported another similar series based on 504 autopsies but as they do not indicate the clinical significance of the various lesions their findings are of less value. Anyone digesting this material cannot fail to be impressed with the frequency of brain damage and associated hemorrhage as a cause of death.

Too often, treatment consists in a frantic effort to reduce intracranial pressure by lumbar puncture, by intravenous hypertonic solutions, by limitations of fluids by mouth, or by subtemporal decompression. The efficacy of these in temporarily reducing pressure cannot be denied, but their ill-timed use undoubtedly exerts a deleterious effect on the brain injury and thereby increases bleeding or edema. This is best illustrated in extradural hemorrhage. Here everyone agrees that any reduction in intracranial pressure tends to increase bleeding with resultant increase in cerebral compression; consequently no one advocates lumbar puncture, hypertonic solutions, and so forth, under such conditions. It would seem, however, that the same principles of hydrodynamics would apply to hemorrhages beneath the dura. Besides we do not treat hemorrhage anywhere else in the body by reducing pressure around the bleeding point, unless it becomes absolutely necessary, or is part of a maneuver to expose and ligate the vessel.

Lumbar puncture, properly used, will give a gradual reduction in tension and for that rea-

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son is of great value at certain times. Its chief disadvantage has been already pointed out, and is common to all pressure reducing procedures. The effects of hypertonic solutions intravenously are much more serious. Milles and Hurwitz<sup>3</sup> working with dogs, and later Masserman<sup>4</sup> using human beings, found that great variations in cerebrospinal fluid pressure were produced in a short period of time. At first there is an increase; this is then followed by a longer phase of decreased pressure, which in turn gives way to a level distinctly higher than normal, the last being maintained for some time. In his work Masserman used varied concentrations and varied amounts of dextrose solutions. All produced similar results, varying only in degree. Such rapid fluctuations in pressure allows hemorrhage and edema to increase during the phase of lowered pressure and then when high levels of pressure are again reached there is less room within the cranial chamber and compression of the vital centers takes place. It seems reasonable to believe that this mechanism explains the unfavorable reactions which sometimes follow this type of therapy.

Dehydration with magnesium sulphate by mouth, or per rectum, or by withholding fluids, has a more even effect on intracranial hydrodynamics. In the presence of shock or active bleeding such measures are contra-indicated, but under other conditions they form a valuable method of treatment, when judiciously used.

From these facts it would seem clear that treatment directed solely at reducing pressure may do actual harm. It is true that pressure cannot be disregarded when it threatens the patient's life, but until that time conservatism should, I believe, be the rule. If it becomes necessary to reduce pressure, the most conservative means which will cause the least intracranial disturbance should be the one of choice. My choice is lumbar puncture. From my experience it would seem that if this necessity arises before five hours have elapsed the patient's chances of recovery are very small.

When a serious head injury is first seen the patient is usually shocked. This phase requires the same treatment that shock from other

causes does, namely, quiet, fluids and heat. Morphine should be avoided, if possible, because it depresses respiration and may later mask important symptoms. A suppository containing one grain of codeine and seven grains of trional gives excellent results as a substitute. It is my practice to omit roentgen rays at first, unless the patient is fully conscious, because it is of little value in determining treatment, and requires additional disturbance to the patient. Of course, the roentgenogram is valuable to demonstrate depressed fractures but a careful examination of the head will also disclose any such depression which is serious enough to require early operative interference. Roentgen rays are also important from the medico-legal standpoint; if necessary they can be taken after death.

The period of shock is followed by one of increased intracranial pressure. The patient becomes drowsy, pulse and respiration are slowed and the blood pressure becomes elevated. In this period the most trustworthy single sign is the state of consciousness. Next in value are the pulse and respirations. Careful observation is necessary to detect the rapid changes that often occur. In my opinion this is the time to do nothing unless forced to by the patient's condition. Diagnostic lumbar puncture within the first 24 hours is to be avoided. It involves doing something to the patient, and the information thus obtained is frequently deceptive. One often hears it said that it is an excellent way to distinguish between subdural and extradural hemorrhage; this is based on the misconception that in extradural hemorrhage the fluid is always clear. It is, if this is the only lesion, but in many instances there has been some bleeding beneath the dura and the spinal tap reveals bloody fluid. Conversely, it is also true that patients not uncommonly die of head injuries with no blood in the spinal fluid.

If there is evidence of increasing pressure, and it threatens the patient's life, then lumbar puncture is indicated. The fluid should be withdrawn slowly and enough removed to reduce the pressure above normal by half. This method of determining the amount of fluid to be removed is rather generally accepted. Spinal taps can be repeated when necessary. If spinal

drainage has not been necessary at first, it can be performed after 24 hours; then the pressure and character of the fluid are determined and are a guide to further treatment, for in the event blood is present, repeated taps may be used to clear the subarachnoid spaces and reestablish earlier normal absorption and pressure.

Not infrequently some operative measures cannot be avoided. Subtemporal decompression is still an operation occasionally used. Formerly a large percentage of serious head injuries were operated on, but in the last decade subtemporal decompression has become increasingly unpopular, more conservative methods have been substituted. It is perhaps safe to predict that in a few years this operation will be abandoned altogether. In my opinion the trauma incident to this procedure often overbalances the good effects, thus producing no benefit to the patient.

Lacerations of the scalp require suture, without drainage, within the first few hours following the injury. Compound fractures also require early surgery, at times with removal of comminutions or the elevation of serious depressions. However, it sometimes happens that minor degrees of depression are best left alone, even though suture of the overlying scalp is necessary. Uncompounded depressed fracture can usually be left alone until the patient's condition makes its elevation a safe procedure. Even when focal symptoms can be attributed to the depressed site, it is not worthwhile to jeopardize seriously the patient's life in order to elevate the fragment. Delay until the general condition improves is usually advisable because these cases stand operation very poorly, and it is also probably true, as Naffziger<sup>5</sup> has maintained, that focal signs which persist are due to an injury of the underlying cerebral cortex, produced by the force of the original trauma, and not dependent on the continued depression of the bone. These cases require a great deal of judgment and patience.

Major craniotomy is rarely indicated until the acute stage has been passed. The great exception to this, however, is with extradural hemorrhage. These cases have a latent period, or lucid interval, between the time of the injury and the onset of symptoms, then they de-

velop increasing drowsiness, paralysis, and coma. Convulsions sometimes occur. The history and hemiplegia constitute the most reliable guides, but if serious doubt exists as to diagnosis a simple trephine will clear up the matter. Immediate craniotomy to evacuate the clot and ligate the vessel is imperative. The results are some of the most spectacular in surgery. One of my cases, deeply comatose during the operation which was performed without anesthesia, sat up on the operating table while the dressings were being put on and insisted on shaking hands before leaving the room.

In summary, it can be said that the treatment is becoming more conservative. However, every case is a problem in itself. I feel that any plan of treatment which does not take into consideration intracranial hemorrhage will be found wanting.

#### REFERENCES

1. Vance, B. M.: Fractures of the skull. *Arch. Surg.*, 14:1023, 1927.
2. LeCount and Apfelbach: Pathologic anatomy of traumatic fracture of cranial bones. *Jour. Am. Med. Assn.*, 74:501, 1920.
3. Miles, G. and Hurwitz, P.: Effect of hypertonic solutions on cerebrospinal fluid pressure. *Arch. Surg.*, 24:591, 1932.
4. Masserman, J. H.: Effects of intravenous administration of hypertonic solutions of detrose on cerebrospinal fluid pressure. *Jour. Am. Med. Assn.*, 102:2084, 1934.
5. Naffziger, H. C.: *Surg., Gynec. and Obst.*, 56:476, 1933.

#### DISCUSSION

Dr. Gilbert Anderson (New Orleans): I think this presentation of Dr. Penick's is very timely, because the presentation of the management of head injuries is always so. It can hardly be reiterated too frequently. We are getting these cases more and more, on account of the present methods of transportation, and it is becoming essential for the man who is isolated from a medical center to be conversant with the management of cases of this description.

To lay down a set of rules is a task that is certainly difficult, and one that I have found impossible. In a teaching connection with the institutions here, I have tried time and again to formulate a set of rules that could be posted in the wards for the guidance of the internes in the management of these cases, and every time that I have drawn up such a document I have had to destroy it. It is undoubtedly true, in this type of case particularly, that each case is a law unto itself, and if you attempt to follow any standardized



method of treatment on all cases you are surely going to get into trouble.

As Dr. Penick so ably brought out, many of these patients are brought in shock, and I think many of them have been damaged by having too much done at that particular time, or too soon afterwards. Unless the patient recovers from shock, you are not going to have any patient to treat anyway, so that the question of roentgen ray examination, neurologic examination, lumbar puncture, hypertonic solution, or what-not, must be deferred until you feel your patient has recovered from shock, and then, unless you are concerned regarding a depressed fracture, I do not see any hurry about taking the roentgen ray, because except in that particular instance it does not help you very much. If there is a hemorrhage you might like to know if a linear fracture had crossed the area of a particular artery, but I do not think the patient should be rushed to the roentgen ray room the very first thing, because you will not get sufficient information to justify the risk. I might say, however, I think every case should have roentgen ray examinations made some time from the standpoint of the medicolegal aspect, because just as sure as one of these cases comes to court and a roentgen ray examination has not been made, you can be made to appear to have been careless and negligent in the management of the case.

Regarding the use of the various methods for a decrease in pressure, I think they are valuable but dangerous. They are measures which have to be used with an understanding of the measure and of the condition of the patient, and where you set about to produce a decrease in intracranial pressure, by whatever means, it should be checked at frequent intervals by means of a spinal manometer. It does not necessarily mean that you have to draw off any fluid, but check your pressure, and a patient who is over-dehydrated will present practically the same picture as one with medullary edema.

I have two slides that touch on the controversial subject of spinal puncture, and whether or not it should be done. We are doing spinal puncture less and less in our cases at Charity Hospital, and I cannot see that our patients are suffering.

(Slide) I have here some figures from a report by Donald Monroe, based on 1450-odd cases from Boston City Hospital, and you see there in his cases treated by lumbar puncture he had 32 deaths, or a mortality of 9.4 per cent, and in his cases treated without lumbar puncture he had a mortality of 122 deaths, or 19.3 per cent. Of course there was a difference in the number of cases.

To amplify that to some extent I want to show the next slide, because if this one were taken just as it stands it might be very misleading.

(Slide) Here he compares the results on the

four general surgical services for a period of three years, at about 1922, when very few spinal punctures were made, and the period of 1930 to 1933. On the first service you see there has not been any very marked change. You notice the per cent of spinal punctures has remained about the same. On the second, they have had a drop in mortality from 27.4 to 12.9 per cent, and at the same time they have had an increase in the cases treated by lumbar puncture from 16 to 57 per cent. On the third, you see the figures, and on the fourth they are controversial, but that is a very small series. But in those cases, you see in general the number of cases treated by spinal puncture is not very great, and it simply shows that they used care in the selection of the cases in which they use this method of decompression. I think it is probably the method of choice where decompression is desired, and secondly the use of hypertonic solutions enterically, and possibly third, the use of hypertonic solutions intravenously, but when they are used intravenously one must be careful for the second wave of adenitis which may follow, and be prepared to repeat the injection if that does occur, in order to take care of that secondary wave. Bagley has shown rather conclusively that blood is a decidedly irritating substance, and when spinal fluid is bloody, one can later drain until it becomes clear. Usually it is clear after three or four taps but that is after the patient has recovered from the acute condition.

Dr. Lucian H. Landry (New Orleans): I wish to emphasize one point that was well brought out in the paper of Dr. Penick, that is in reference to the roentgen ray examination. In the majority of the accident cases brought into the hospital with a cranial injury, the tendency is to rush the patient to the roentgen ray room for an immediate picture; this is absolutely the worst possible teaching. The main concern is the amount of damage to the underlying brain. The fracture plays a relatively small part in the prognosis of the case. The only fractures that call for early surgical intervention are the depressed fractures and the vast majority of these fractures can be easily diagnosed without the use of the roentgen ray.

In the medico-legal cases the lawyers lay a great deal of stress on the existence or non-existence of a fracture and will try to belittle the doctor if a roentgenogram is not exhibited.

We must teach the lawyers that it is possible to have a severe intracranial lesion without the existence of a fracture and vice versa, that a long linear fracture may exist without any intracranial disturbance.

Dr. J. D. Young (Shreveport): I enjoyed listening to the paper, and also the discussion.

I think Dr. Penick, Dr. Anderson and Dr. Landry neglected to state that in treating a diseased

or injured brain a call for the help of the neurologist is paramount. I think if they used the neurologist more their successes might be better. We know that you can be guided quite a bit by your neurologic findings and, especially ophthalmoscopic findings, in these brain injuries.

As discussed by Dr. Penick, Dr. Anderson and Dr. Landry, the injury of the underlying tissue is most important. I mean the meninges and the brain. The treatment, as a rule, should be conservative, intelligent but radical when necessary.

I agree with the essayist that a period should elapse before any active measures are taken, and the period of shock should be passed by the patient before treatment is undertaken.

I do not know but that the doctors are right regarding the spinal puncture. We are getting away from spinal punctures in these patients, unless it is absolutely necessary.

Dr. Rawley M. Penick, Jr. (New Orleans): I am sure a great many people are wondering why I lay so much stress on taking roentgenograms, and why almost everyone who has discussed this paper has talked about that point. It is really distressing to see a patient in the hospital, completely shocked, being carted around, on a stretcher, lifted from the stretcher onto the roentgen ray table, his head probably manipulated, and then taken to the ward

and a lumbar puncture done. That too frequently happens. And there is no doubt about it, that is not the way to treat shock.

From the standpoint of medicolegal cases, it is true that roentgenograms are very important, but I think the time has come for us to remind the judges and the jury and the lawyers that we are treating the patient for his best interests.

As to the question of the neurological examination, perhaps I did not emphasize that enough, because in the time allotted I was unable to discuss a good many things that I wanted to. But it is true that this is one of the most important things to do early, even when the patient is badly shocked a simplified examination can be done.

There is one thing that we have to keep in mind always in treating these injuries, that is extradural hemorrhage. This is something we can do something for, something we have to do something for, to save the patient. And there is no doubt about it, that the most reliable way to pick up an extradural hemorrhage is by a neurological examination. It is also true in cases where an extradural hemorrhage is seriously suspected, that it is wise under some conditions to trephine the patient, to be sure. That sounds like a rather radical procedure, but it is so important not to miss an extradural hemorrhage that it is often justified.

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## CHARLES JEFFERSON MILLER

The medical profession of New Orleans and Louisiana was shocked to learn of the death of Dr. Miller on March 21, 1936. Dr. Miller had always been a man of vigor and activity and his death was certainly most unexpected. In the passing of this great gynecologist New Orleans, Louisiana and the medical profession of the South lose an outstanding man. His record of activities in his chosen field is a magnificent one. He was Professor of Gynecology in the Tulane Medical School; he was past-president of the American College of Surgeons;

he was past-president of the American Gynecological Society and the Southern Surgical Association and the Orleans Parish Medical Society. His name and fame extended all over the United States.

In addition to his accomplishments and achievements as a surgeon Dr. Miller was a man of charming personality. Every one who knew him liked him and he was a much beloved physician to innumerable patients. Kindness and consideration were two of his outstanding characteristics. To the lowly patient in the public ward he was as attentive and devoted in service as he was to those of wealth and position. For years he gave faithful service to the Charity Hospital and the Touro Infirmary devoting his time ungrudgingly and happily to helping the unfortunate poor.

Dr. Miller's death leaves a void in the medical world of New Orleans which will be difficult to fill. Fortunately he has taught innumerable students, some of whom sooner or later will be able to follow their teacher's example.

## CHARLES LOUIS CHASSAIGNAC

On March 21, 1936, died one of the older members of the medical profession of New Orleans who by his teaching and by his example had exerted a profound influence on the medical profession of the Parish, and State. Dr. Chassaignac for many years was actively interested in organized medicine. He served as president of both the Louisiana State and Orleans Parish Medical Societies. He was a member of the House of Delegates of the American Medical Association. He took an active part in the running of the Eye, Ear, Nose and Throat Hospital for eight years and for many years was Dean of the Tulane University Graduate School of Medicine. For twenty-six years Dr. Chassaignac edited the New Orleans Medical and Surgical Journal. His accomplishments in many fields were numerous and varied.

Dr. Chassaignac was always a good contestant to have on one's side but only if that particular side happened to be right would he be with you. He always maintained the very highest standards of medical ethics and always



he was willing to fight for what he believed just and proper. He was truly a gentleman of the old school, courteous and polite always, yet never afraid to express his opinion nor to reprimand one courteously and justly should the occasion arise. His services to the medical profession were greater than those which would be listed amongst his medical accomplishments because his standards were so high that his example influenced the profession as a whole. Dr. Chassaignac's death is a real loss to his numerous patients and innumerable friends.

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#### ABDOMINAL PAIN IN DISORDERS OUTSIDE THE ABDOMEN

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There is no doubt but that there have been performed in the past innumerable operations for some believed-to-be surgical emergency when in reality the pain and tenderness have depended upon some extra-abdominal disorder which has mimicked closely the symptoms of acute intra-abdominal conditions. Not always is the condition necessarily one that may require operation. In spite of the many papers and the oft-repeated statements of cardiologists there are still a large number of people whose cause of death is ascribed to acute indigestion, whereas in reality these people suffer from coronary occlusion. People do not die of acute indigestion except under the most remarkable circumstances. They do die with a regularity that is most depressing from coronary disease and the symptoms of the two conditions may resemble each other closely. Nearly

every physician knows that a pleurisy and the onset of pneumonia, with fever and leukocytosis and so on, may resemble an acute appendicitis when the pain is referred down to the abdomen and is associated with hyperalgesia and muscular rigidity. These may be spoken of almost as classic expressions of conditions which ape one another but there are many other disorders which will produce abdominal pain and yet the cause may be far removed from the abdomen. From compiling a list of such conditions which have appeared in the literature for the past few years it might be said that 52 separate and distinct entities have been described in which the condition may at one time or another produce acute or chronic abdominal symptoms. These disorders range from the abdominal pain at the onset of measles to Addison's disease, from diseases of the urogenital tract to cerebral disease, from a cord tumor to abdominal pain produced by the uremic state. The important thing to remember is that abdominal pain is generally a symptom of abdominal disease but there is always the very strong possibility that it may be a symptom of some condition other than that which seems most likely. No patient should be operated on without a thorough and complete physical examination. The patient should be studied thoroughly from head to foot. In these various conditions that resemble abdominal disorders laboratory examinations are usually of small significance. Their interpretation depends upon the careful study of the patient and keen clinical judgment.

## HOSPITAL STAFF TRANSACTIONS AND CLINICAL MEETINGS

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#### OSCAR ALLEN TUMOR CLINIC CHARITY HOSPITAL NEW ORLEANS

The Scientific meeting of April was called by Doctor James T. Nix, Director. The essayist was Miss Louise Meyers, M. A., who presented the following paper:

#### EMOTIONAL FACTORS IN THE TERMINAL CARE OF CANCER PATIENTS

Emotional factors are present in any illness, particularly any chronic one, such as tuberculosis, heart disease or diabetes because a long period of hospitalization, inactivity, or radical change in

the patient's usual way of living inevitably produces emotional disturbances. Cancer, likewise, on account of its prolonged terminal stage, causes great emotional upset, not only for the patient but for his family as well. There is always much anxiety over the patient's reaction to cancer, while little concern is shown over the friction that may arise in a family with a minimum income and few conveniences as a result of providing terminal care for a patient with cancer. The patient, of course, is miserable. He exhibits increased irritability due to pain, and marked introversion resulting from occupational and recreational inactivity. These manifestations, in turn, react on the other members of the family. The following cases il-

lustrate the emotional problems that are encountered in the terminal care of cancer patients.

Case I. A forty-two year old white man, Mr. Albert C., with generalized carcinomatosis, the original lesion being malignancy of the clavicle, required terminal care over a period of four months. The patient had intense pain in all parts of the body, the head, back, legs and chest. Roentgen rays showed evidence of the complete destruction of the sixth rib by the malignant process. He had a large decubitus ulcer on his side and pressure on this area could not be relieved because, while only minimum comfort was derived from lying on his left side, pain was intensified on the right side or back. What little appetite the patient had was capricious, and his wife's ingenuity was taxed to prepare tempting meals; and, even so, the food was either "too hot, too cold, or had cooked too long or not long enough." Throughout the four month period, the patient wanted his wife to remain with him constantly, even objecting to having relatives stay with him while she slept. During his fitful periods of sleep, the patient talked out loud and called for his wife. To make the situation worse, in November 1935 the family had no income. The patient, an unemployed pipe-fitter, had been on work relief with the Federal Emergency Relief Administration until his illness made it impossible for him to continue, but direct relief was given until the liquidation of the Federal Emergency Relief Administration. At that time the possibility of certifying Mrs. C. for work on a Works Progress Administration project was considered, but as the patient wanted his wife to care for him and although the children, two girls, were in high school it was considered a better plan for Mrs. C. to remain at home and for the children to continue in school, so relief was secured through the Department of Public Welfare. A visiting nurse from the Child Welfare Association was asked to give general nursing care, and the services of a maid from seven to two every day except Saturday and Sunday were arranged for through Works Progress Administration. In spite of these provisions, the family had little rest, sleep or quiet during the four months of terminal care. Mrs. C. never left the house during that period and the two girls were unable to have any friends in because it had been necessary to make the living room into a bedroom for the patient's use. Mrs. C., worn out by the time of Mr. C's death was simultaneously having menopausal symptoms. Examination in the clinic was urged but Mrs. C. was reluctant and wanted to investigate the standing of the doctors likely to treat her and choose the best one. She was terrified for fear she too might have cancer and would not be told. The fact that Mr. C. had not been told he had cancer nor had the seriousness of his condition ever been explained to him, leading Mr. C. to speak hopefully of the time he would

be able to assume the support of his family, frightened Mrs. C. She was afraid that she would encounter the same protectiveness and evasion. The elder daughter had lost weight during her father's illness and while this was explainable, a check-up was considered advisable. She, however, became panicky at the mere mention of doctors and insisted that no matter what happened to her, she would never go to a physician or undergo any treatment.

This case illustrates not only the pronounced emotional and even physical disturbances produced in several members of the patient's family but also shows how the groundwork of resistance to medical care may be developed in members of the family of a patient with cancer.

Case II. Mr. Herbert M., 53 years old, a single white man, with diagnosis of recurrent carcinoma of the neck and tracheotomy, was doing road construction work in Shreveport, Louisiana, when he became ill and the tracheotomy became necessary. Although the patient was originally from New Orleans, Louisiana, he had been working in Shreveport for five years, having gone there following the death of his father. Ill, without friends or relatives in Shreveport, Mr. M. was homesick and wrote his only sister, to whom he was greatly attached, suggesting that he return home. This sister, who had always been the mainstay of the family and the one to whom every member in trouble turned, was eager to provide care. The sister, her husband, who was an "extra" engineer for a railroad, earning between \$40 and \$50 a month, and their two younger children, 10 and 12, as well as their 21 year old married son, his wife and their six month old daughter, lived together. The married son, a truck driver for an ice cream company working on commission and paying a helper out of his salary, averaged \$18.00 a week in winter and \$23.00 a week in summer. Rent was \$18.00 a month and the house consisted of two bedrooms upstairs, a bedroom, bath, dining room and living room downstairs. When Mr. M. arrived, the family was distressed over his condition. They were helpless and had no idea how to care for him. The patient cleansed the tracheotomy tube as best he could but the odor was very noticeable and made the daughter-in-law ill. The patient's whistling breath also made her ill, and afraid that the patient's condition was infectious, the daughter-in-law took her baby and went to her mother's home. The patient's sister, fearful that this might cause a break between her son and his wife, and exhausted through caring for the patient, brought him to Charity Hospital. Although hospital care was unnecessary, it was felt that in view of the set-up in the sister's home, she could not be urged to take him back. Besides the sister, the relatives included two married brothers, one of whom was supporting his mother-in-law and father-in-law besides his own family. The wife of the other

brother who was financially unable to provide care become violently angry if the patient's condition was mentioned, insisting that his illness was no affair of hers and refusing to help in any way. Mr. M. could have been returned to Shreveport for care because during the five years he lived there, he was not dependent on any agency for relief, but on account of his devotion to his sister and his intense desire to be near her in New Orleans, this was not considered feasible. As relatives would not provide care and as residence in Shreveport made the patient ineligible for care in the Touro Shakespeare Home, the only institution in New Orleans accepting cases of malignancy, hospital care had to be continued until death. The tragic consequences of attempting to provide home care under circumstances where it is not reasonably tenable is demonstrated by this case. It illustrates the range of emotionalism brought about by the terminal care of cancer, including the fear that the baby would contract cancer, the possibility of inducing marital friction in the branch of the family not equipped to provide care, and the complete lack of sympathy and willingness to share responsibility on the part of the branch financially able to care for the patient.

In the following case, conflict arose over the fact that the patient's sister, eager to provide care at home regardless of the detriment to herself and child, was financially and physically unable to carry out such a plan.

Case III. Out of his earnings as a checker for a sugar refinery, Mr. Thomas T., a single, 52 year old white man with carcinoma of the left tonsil had supported his sister and her little girl for twelve years, because the sister's husband, a former insurance salesman, was insane. The sister's obesity as well as a large umbilical hernia, persisting after two hernioplasties, made it impossible for her to work. During the past year, however, as part-time employment only was available and as his illness made it increasingly difficult for the patient to work, in order to economize the family moved into a basement because the rent was free. The basement, one large room with no partitions, was damp and hard to heat. Privacy was impossible. When Mr. T. was no longer able to care for himself, on account of the difficulty of caring for him with a growing girl around, the child was sent to stay with first one neighbor and then another. This unsatisfactory arrangement was continued until the sister's physical condition and the child's illness made its further continuance impossible and the patient's admission to the hospital necessary. This separation distressed the sister because at the time of her mother's death she had promised always to look after Mr. T., her mother's favorite child. Since the patient had been "disappointed in love" and since his earnings had been used to support

the family, the sister felt that she was not being fair to the patient. Mr. T., in turn, was unhappy in the hospital because there was no one to talk with and on account of lack of carefare his sister could not visit him daily.

Case IV. Mrs. Elizabeth D., a 50 year old white woman, had a radical excision of extensive malignancy, involving the entire maxillary bone. Hospitalization covered a two and a half month period and upon discharge dressings were to be continued at home with periodic re-examination. The patient, a widow, lived at home with her 21 year old son and 18 year old daughter and her stepmother who was also her aunt. The stepmother and daughter did the cooking, housework and laundry, and were in constant attendance on the patient because Mrs. D. became frightened when left alone and because moving about required assistance. The patient hated to leave the house or even sit out of doors because the bandages were disfiguring and people stared so. With glaucoma of one eye and the other having been removed at the time of the excision of the malignancy, Mrs. D. could not read or amuse herself in any way requiring sight. She usually sat indoors and whined. The dressings, done daily by a nurse from the Child Welfare Association, in order to save the patient the trouble of reporting to the clinic, according to the patient, were not done satisfactorily, being either too tight or too loose. The stepmother and the daughter took turns sitting with the patient and the stepmother had to sleep with her. If the stepmother demurred, the patient was hurt and felt that everyone was trying to avoid her on account of her unsightliness. The 18 year old daughter, Mary, had to stop vocational school because her mother wanted her at home. Mary's only recreation consisted of attending a Works Progress Administration English class three times a week. A maid was secured through the Works Progress Administration in the hope that Mary could return to school and have some time to herself but the patient objected and the maid was sent away. Mary, smiling, but with bitterness, said that her mother and stepmother seem to be afraid that the maid might relieve her of part of her share of the work. The centering of the entire household on the patient's eye drops of eserine, xeroform and sterile gauze dressings, and her periodic extractions of teeth, involved the family in a constant state of tension. Eddie, the son, in spite of the fact that he was obviously unsuited for clerical work, had to struggle to keep employment in a bank because his mother had always dreamed of his having a white collar job. After a day of uncongenial work, Eddie returned to the unhealthy atmosphere of his home. His reactions to Mrs. D's demands of attention and sympathy were bursts of anger, during one of which he struck Mary, giving her a black eye.



As long as there is cancer, these situations will be encountered again and again. The feeling of despair at the overwhelming burden of the patient's care and a desire to shift the responsibility of the patient's care may be considered a normal reaction of families without an adequate income or adequate housing to provide terminal care. Increased facilities for the care of chronics will help to meet these problems, but until that time they can be handled only through painstaking interpretation of the diagnosis and its implications of long-time care to the patient and to the family.

#### J. T. NIX CLINIC NEW ORLEANS

At a meeting held in April, 1936, Doctor J. M. Perret read the following paper:

#### UNDULANT FEVER

Report of Two Cases with Unusual Findings:  
(1) Osteomyelitis, (2) Meningitis

The object of this paper is to place these two cases presenting unusual findings on record and thus to contribute in a measure to the symptomatology of a disease which is becoming common and important in this country and is so protean in its manifestations.

Case I. Osteomyelitis of left tibia. This was the case of a white girl, ten years of age, a native of Louisiana and a resident of Erwinville, Pointe Coupee Parish, Louisiana.

The clinical course was characterized by fever, headache and severe pains in the upper part of the left leg, near the knee joint. The fever began at the end of November, 1935, and lasted until the end of February, 1936, that is, about three months, and reached 104° F. The pains in the leg were over the upper anterior aspect of the left tibia and were very severe. They occurred in paroxysms four or five times a day, would last about half an hour, and continued over a period of about three weeks. There was sensitiveness to the pressure. The child kept the limb flexed at the knee.

It is well known that arthralgia, or joint pain, is very common in undulant fever, but up to the present time there is quite a paucity of reports in the literature of cases showing bone changes. Kulowski and Vinke<sup>1</sup> report a case of suppurative spondylitis, in which the roentgen ray showed destructive lesions in the interarticular facets. Feldman and Olson<sup>2</sup> report finding spondylitis in the hog.

Laboratory and roentgen ray findings Nov. 30, 1935, roentgen ray: No roentgen ray evidence of bone or joint pathology.

Dec. 2, 1935, Blood: Total white count, 8,000. Differential: Small lymphocytes 10, neutrophils 64. Malaria, negative. Widal, positive in 1 to 160

dilution. Undulant fever, negative. Blood culture, negative.

Dec. 3, 1935, Blood: Total white count, 9,500. Differential: Small lymphocytes 24, neutrophils 76. Widal, negative.

Dec. 3, 1935, Roentgen ray: Negative for bone or joint pathology.

Dec. 22, 1935, Blood: Total white count, 6,500. Differential: Small lymphocytes 37, large lymphocytes 5, neutrophils 58.

Dec. 31, 1935, Urine: Negative.

Jan. 2, 1936, Blood: Undulant fever positive in 1 to 160 dilution.

Jan. 25, 1936, Roentgen ray: Osteomyelitis involving the upper and middle thirds of left tibia. The infection involves the epiphysis of the head of the tibia.

Feb. 27, 1936, Roentgen ray: Old osteomyelitis of proximal end of left tibia. No evidence of sequestrum formation. Condition apparently over radiograph of January 25, 1936.

Mar. 18, 1936, Roentgen ray: Old osteomyelitis in the upper portion of the tibia involving the central portion of the epiphysis as well as the diaphysis. Condition is improving and definitely limited.

Apr. 15, 1936, Roentgen ray: Old osteomyelitis upper end of left tibia involving the epiphysis. No evidence of sequestrum formation. Little if any roentgen ray change from previous radiograph.

Apr. 15, 1936, Blood: Total white count, 8,750. Differential: Small lymphocytes 36, eosinophiles 2, neutrophils 62.

Treatment and Outcome. The treatment was symptomatic, physiotherapeutic and orthopedic. The child was kept in bed and light therapy was used over the painful part. For the contracture a Buck's extension was first applied, later on light plaster of Paris casts were applied to straighten the limb, and the patient was allowed to go about using crutches. At the time of writing this article, April 16, 1936, the fourth plaster cast was applied on this date. The knee joint and the peri-articular structures are swollen and moderately painful. The limb is held flexed at an angle of about 30 degrees. How much permanent disability, if any, will result it is impossible to foretell at this time. It is apparent, however, that the child will require orthopedic treatment for a good while longer with the possibility that some surgical intervention may become necessary at a future date to remove the diseased bone.

Case II. Meningitis. The patient was a white female of 22 years, a stenographer, a native of Ohio but a resident of New Orleans for many years.

The clinical course of this case was very protean in its manifestations. Fever, which was the most prominent and constant symptom, lasted five

months and reached over 104° F. The respiratory symptoms were marked and were present from the onset until the end of the disease. They were more severe at the onset and were those of a bronchopneumonia. Cases with such pulmonary symptoms have been mistaken for tuberculosis. Frock<sup>3</sup> reports fifteen cases suspected of tuberculosis, who were found to have undulant fever.

As the patient was suffering from chronic cardiac valvular disease and as she ran a septic course, she presented the picture of a subacute bacterial endocarditis. Indeed, this similarity of undulant fever to subacute bacterial endocarditis has been noted in the literature<sup>4</sup>. I see no reason why in such cases the endocarditis might not be caused by undulant fever as we are dealing with a bacteremia. Classical symptoms of undulant fever such as joint pains, profuse sweats, headache and gastrointestinal upsets were present. The patient had also a maculo-papular, scarlatiniform eruption. I have noticed in other cases eruptions such as occur in typhoid and typhus fevers. As far as I know, I do not think that enough attention is given to these eruptions of undulant fever. In my experience, they have proved useful diagnostic suggestions. The meningeal symptoms made their appearance about a month after the onset of the disease. Headache, restlessness, vomiting and slight rigidity of the neck were present. Opisthotonos and Kernig's sign were absent. The case looked like a tuberculous rather than an epidemic cerebrospinal meningitis.

Bingel and Jacobsthal<sup>5</sup>, writing in 1933, could find only four reports of neurologic complications of undulant fever. They added a case of meningitis of their own. Hartley, Millice and Jordon<sup>6</sup> reported a case of meningitis in 1934. In their paper they mention the case of Sanders reported in 1931, and a case of Hansmann and Schencken in 1932. The acute meningeal symptoms lasted about a month. After this for about six weeks the patient complained at times of headache.

The following is the neurological report of Doctor R. Unswarth who saw her on November 8, 1935. Neurological findings of meningitis: Spinal fluid under approximately 30 mm. mercury, straw color. Probably tuberculous meningitis. Recommendations: Frequent spinal drainage, every 48 hours. Repeated sputum examination for tubercle bacilli. Symptomatic handling.

Ophthalmological examination by Doctor M. F. Meyer on November 18, 1935: Motility of eye muscles unimpaired. Eye grounds show no changes except a slight fullness of retinal vessels.

Laboratory and roentgen ray findings. Oct. 14, 1935, Blood: Total white count, 15,250. Differential: Small lymphocytes 26, neutrophils, 74. Total red blood cells, 3,140,000. Hemoglobin 50 per cent. Color Index 0.8 plus. Malaria, negative.

Oct. 14, 1935, Roentgen ray of chest: Unre-

solved pneumonia in the lower portion of upper right lobe with a thickened interlobar pleura just below the region. Heart and aorta negative.

Oct. 15, 1935, Urine: Negative.

Oct. 20, 1935, Blood culture: Negative.

Oct. 28, 1935, Blood: Total white count, 9,500. Differential: Small lymphocytes 34, neutrophils 66. Malaria negative.

Oct. 28, 1935, Roentgen ray of chest: Previously reported unresolved pneumonia, lower portion of the right upper lobe shows marked improvement.

Nov. 5, 1935, Sputum: Consistency thin. No blood nor elastic tissue. Pus present. Tubercle bacilli negative. Staphylococci, pneumococci and saprophytes present.

Nov. 8, 1935, Urine: Negative.

Nov. 8, 1935, Spinal fluid: Straw color. White cells 790 per cu. mm. Polys 90, lymphocytes 700. Globulin, 4 plus. Wassermann, negative. Colloidal gold, negative. Sugar, 30 mg. per 100 c. c.

Nov. 9, 1935, Urine: Trace of albumin.

Nov. 10, 1935, Spinal fluid injected into guinea pig. Reported negative January 31, 1936.

Nov. 13, 1935, Spinal fluid: Clear. White cells 10 per cu. mm. Polys 2, lymphocytes 8. Globulin, very slight increase. Sugar, 50 mg. per 100 c. c. Chlorides, 1.87 grams per cent NaCl.

Nov. 16, 1935, Sputum: Negative for tubercle bacilli. Many pus cells. Pneumococci, streptococci, staphylococci and saprophytes present.

Nov. 18, 1935, Roentgen ray of Sinuses: Negative.

Nov. 18, 1935, Spinal fluid: Cell count 8. Globulin, very slight increase. Sugar, 50 mg. per 100 c. c. Chlorides, 475 mg. or 0.475 grams per cent NaCl.

Nov. 18, Spinal Fluid Culture: Negative.

Nov. 26, 1935, Sputum: Tubercle bacilli, negative. Pus cells present. Staphylococci and streptococci present.

Nov. 27, 1935, Urine: Trace of albumin.

Nov. 30, 1935, Urine: Faint trace of albumin.

Dec. 5, 1935, Spinal fluid: Clear. Very slight xanthochromic color. White cells, 4 per cu. mm. Polys 1, lymphocytes 3. Culture, negative. Sugar, 90 mg. per 100 c. c.

Dec. 5, 1935, B. melitensis, negative; B. abortus, negative.

Dec. 5, 1935, Roentgen ray: Marked improvement of lung over previous examination though there is generalized increases of lung markings. Heart and aorta normal.

Jan. 20, 1936, Spinal fluid: Loaded with blood cells. Globulin, plus 1. Mastic test, negative. Wassermann, very weakly positive. Sugar 45 mg. per 100 c. c. Chlorides, 767 mg.

Jan. 24, 1936, Blood: Total white count, 11,000. Differential: Small lymphocytes 11, large lymphocytes 5, eosinophiles 3, neutrophils 81. Total red blood cells, 5,140,000. Hemoglobin, 60 per cent.

Color Index, 0.6. Tularemia, negative. Undulant fever, positive in 1 to 160 dilution.

Jan. 24, 1936, Urine: negative.

Treatment and Outcome. The treatment had consisted of rest in bed, plenty of nourishment, medication to relieve symptoms, undulant fever vaccine (11 injections), spinal punctures and blood transfusion.

The case terminated fatally. It seems that the previously damaged heart was unable to stand the superimposed infection. The meningeal symptoms had cleared up and seemed in no wise contributory to the fatal outcome.

#### BIBLIOGRAPHY

1. Kulowski, J., and Vinke, T. H.: Undulant (Malta) fever spindylitis: Case due to *Brucella melitensis*, bovine variety, surgically treated, *J. A. M. A.*, 99:1656, 1932.
2. Feldman, W. H. and Olson, C. Jr.: Spindylitis of swine associated with bacteria of *Brucella* group, *Arch. Path.*, 16:195, 1933.
3. Frock, A.: Undulant fever imitating pulmonary tuberculosis, *Ugeskrift f. læger*, Aug. 17, 1933.
4. Sidel, Nathan, and Segal, Maurice S.: Undulant fever. *N. Eng. Med.*, 212:816, 1935.
5. Bingel, A. and Jacobsthal, E.: Clinical and bacteriologic picture of meningitis in Bang infection, *Klin. Wchnschr.*, 12:1093, 1933.
6. Hartley, G. A., Millice, G. S., and Jordan, P. A.: Undulant fever meningitis, *J. A. M. A.* 103:251, 1934.

#### THE HUTCHINSON MEMORIAL CLINIC

Scientific Section: Symposium on Thyroid Disease, conducted by the Department of Surgery, Dr. Ambrose H. Storck presiding.

The symposium was limited to those diseases of the thyroid gland in which the matter of surgical intervention arises. Dr. Storck opened the discussion by the presentation of three cases, one a white female of 52, who, following domestic and financial difficulties, developed characteristic findings of exophthalmic goiter except for unilaterality of the exophthalmos; she was treated by subtotal thyroidectomy; one a white female, 28 years old with nodular goiter of 7 years' duration diagnosed as fetal adenoma or a cyst of such origin, without hyperthyroidism, operation being advised because of the frequent occurrence of malignant changes in this type of lesion; the third case a white female 58 years of age who had been operated for hyperthyroidism, presumably toxic adenoma, in 1915 with subsequent recurrence of symptoms and nodular masses in the thyroid area. Palpitation, headaches and hypertension were present. Removal of the recurrent thyroid tissue produced symptomatic relief, with a drop in blood pressure to normal range.

Dr. Storck: In the Department of Surgery we have been considering our cases of thyroid disease as follows: (1) Adolescent goiter or the colloid goiter occurring in children. (2) Nontoxic adenoma, which while nontoxic during its first appearance may, in later years, become toxic. Hertzler states that he is now seeing patients with

toxic adenomas, whom he saw as children with colloid goiter, or in later adult life with nontoxic adenoma. He wonders whether the later-appearing toxic adenomas are entirely new and suggests that they are likely due to changes occurring in earlier-existing, simple nontoxic adenomas. (3) The toxic adenoma or toxic colloid goiter. (4) Typical exophthalmic goiter. (5) The apathetic type or "burned out" type of exophthalmic goiter characterized by extreme degree of weakness and muscular degeneration. (6) Fetal adenoma. (7) Cysts of the thyroid, which may be of two types: (a) those related to or arising in fetal adenomas and (b) the type which is due to confluence of cysts in a colloid goiter. (8) Carcinoma, sarcoma and rare tumors of the thyroid. (9) Aberrant thyroid growths, i.e., intratracheal, sublingual, submaxillary and subretinal. Roentgen ray examination has become a most important adjunct in the diagnosis of these cases, especially in the instance of substernal and retroesophageal thyroid growths. (10) The inflammatory diseases of the thyroid as tuberculosis, syphilis, Riedel's struma, struma lymphomatosa, (Hashimoto), and acute inflammatory, suppurative and abscess-forming processes. (11) Degenerated thyroids—calcium deposition in thyroid. (12) Hypothyroidism—myxedema, cretinism.

An important development in the treatment of ocular complications of exophthalmos, and which I think deserves at least passing mention in this discussion, is the orbital unroofing operation devised by Naffziger for use in some advanced cases of exophthalmos, in which corneal ulceration or severe conjunctivitis may occur. This procedure may replace the performance of a blepharophimosis in at least some cases.

The adrenal-thyroid relationship which Crile has done much to popularize, may attract increasing attention, but I think most of us feel that as long as there is any definite enlargement of the thyroid in association with symptoms and signs of hyperthyroidism, the best procedure is still to remove the thyroid gland rather than to resort to adrenal denervation.

Dr. Musser: This woman with the unilateral exophthalmos is a rather unusual case. I could not see the right eye but it looked to me almost as if she had an enophthalmos. Very often one eye protrudes more than the other. Another feature is the fact that she is 52 years old. It is rather an exception to find exophthalmic goiter developing at this age. Another thing is the psychogenic origin. Psychic trauma so frequently is the match which lights the powder which causes the explosion in these cases. I think fundamentally these people are ready to be set off by some such spark.

The other patient, to my mind, presented a problem for treatment, and I am not at all sure that I would have acquiesced in final decision to oper-



ate on that patient. It is not definitely known that she had a fetal adenoma and more particularly since she has no signs of hyperthyroidism at the time. It is a nice question and for which much might be said on both sides.

Now a word or two on thyroidectomy in congestive heart failure. My experience has not been large. I must confess with some selected cases the results have been fine indeed. I showed a patient in clinic Wednesday who had been operated on fifteen months before and had a total thyroidectomy. She came back to us with a basal metabolic rate of minus 35. Prior to operation she was handicapped, and the cardiac system crippled; following the removal of the thyroid she has had only one attack. Another case with congestive failure in which Dr. Ochsner took the thyroid out was a woman who stayed in the hospital for two years and never went out without signs of congestive failure. Her thyroid was removed and we gave her very definite directions about what she was to do afterwards. She felt so well one day that she pitched in and did a day's washing and came in again with failure. I believe that if that woman had not overstrained her heart with severe effort doing this wash that she could have carried on for some years. The arguments pro and con thyroidectomy in congestive failure are becoming more and more acrimonious. The Boston group, notably Levine and Blumgart, and with the exception of Christian and Means, are enthusiastic indeed. These men point to numbers of cases with good results in congestive failure. On the whole I think the operation has not been as successful as the first reports would lead you to believe that it has been. A great many people have died when subjected to it. Furthermore some have had the misfortune to die on the table. It is not always because cases have been poorly selected. The men who are doing this rather intensively, contend that the misfortunes are due to poorly selected cases and there must be a certain amount of cardiac reserve before the patient may expect to derive any benefit from lowered demands of the heart. Dr. Christian and Dr. Hertzler feel this way; that if you take out the thyroid you are simply inducing another factor which may be difficult to control and which is giving the patient simply another disease. I might mention that there is not only the thyroid heart, but there is also a myxedema heart.

In the other type of cardiac failure associated with angina, the reports have been more satisfactory and many proponents are confining operative procedure to patients who have angina, and in patients with congestive failure are no longer removing the thyroid. This woman I just mentioned derived apparently no benefit from a sympathectomy but following the removal of the thyroid was markedly benefitted. In angina you are

dealing with subjective fear; in congestive failure you have very definite physical evidence of something going wrong. The pain is a very real thing but I do think that sometimes after having had pain, minor attacks are exaggerated and I think sometimes the mere fact that you have taught the patient to take a calm, peaceful outlook on life and particularly to avoid effort, will cut down on the number of attacks and the minor attacks will disappear. There may be some slight psychic factor which may be responsible.

Dr. Dauer: Usually our conception of the geographical distribution of thyroid disease, particularly the adolescent or colloid type of goiter, is that it is most common in the Great Lakes region and in the northwestern part of the country. Previously most of the surveys have been limited to groups of school children in northern cities. It was not until the World War when men were drafted in the Army and had physical examinations that we were able to get a well-rounded idea of the distribution of thyroid disease in the entire country. I have jotted down the number of men per 1000 troops on a map of the United States to give you an idea of the distribution of simple goiter, remembering that the ratio of goiter among male and female is about 2 to 3. You see in the northwest the highest rates for simple goiter and to a less extent in the Great Lakes region. Notice that in this particular region the rate was comparatively low all along the southern part of the United States and also along the eastern shore. I think it is rather interesting that this should have occurred along this shore-line since we do know that sea water contains a large percentage of iodine and seafoods have a higher content of iodine than any other food. In Massachusetts they have determined that chlorine was carried inland for fifty or sixty miles, probably by means of a fine spray of sea water. The same could occur with iodine. It is only the states on the immediate coastline that have a low incidence of adolescent goiter. Among the drafted men it was noticed that the highest rate was found among men coming from sparsely settled districts and secondly among those living in mountainous regions, and the lowest in agricultural sections of the country. There was not much difference so far as rural and urban districts were concerned. A few surveys have shown that the colloid goiter is more frequently found among colored than white children, the ratio being 3 to 2. It is rather interesting that the highest rates for exophthalmic goiter are found generally in districts where you have the greatest percentage of young people with colloid goiter.

Dr. Menville: The roentgen ray is of aid in diagnosing substernal goiters and particularly retroesophageal and retrotracheal goiters. However, we cannot say definitely from the roentgen ray film alone that certain tumor shadows are

goiters, but with clinical help the diagnosis is made easier. We can presume it to be so with the proper clinical manifestations and history. One of the most recent advances made in the treatment of toxic goiter has been by Borak of Vienna, who reported a large number of cases of toxic goiters in women around the menopausal period who had not been benefitted by certain forms of treatment, but who were markedly benefitted by irradiation of the pituitary gland. He considers that there is a close interrelationship between the pituitary gland and thyroid glands. We are firmly convinced by experience of the efficacy of radiation therapy in exophthalmic and toxic cases, and this form of therapy is now being used universally. There is no question but that surgery plays a predominant role in the treatment of this disease when handled by experienced goiter surgeons, but this does not always follow. Roentgen ray is by no means 100 per cent cure but on the whole we can say that from 66 to 76 per cent are cured by radiation therapy. A general average compiled from a series of 10,000 cases treated all over the country was 66.22 per cent. Ten per cent of these cases had previously been operated upon and had recurrences and were subsequently treated with roentgen ray or radium.

Dr. Perkins: I am sure that most of you are wondering what contribution we can possibly give to this controversial subject. I am interested in the point of view of some way of preventing it. Being interested primarily with the normal physiologic functions in the body, we recognize that here we have a function which is normally balanced and under some circumstances this balance becomes disturbed. We do not know how delicate or what the trigger element is. There must be a fairly sensitive balance. The whole story points then to the recognition of an increase in what is ordinarily a normal function; that is, increase of thyroxin secretion. For some reason this increasing factor becomes more powerful until the mechanisms go beyond their physiologic limits and result in pathological changes. From then on the goiter develops. The story behind that is the one which interests us most. As I speak on the possibility of prevention, I am speaking on very few known facts. The question has been raised as to what is the greatest initiating factor in producing secretion of thyroid. There have been three general ideas: (1) Iodine; the available supply of iodine, or the utilization of iodine by absorption and metabolism. This explanation seems to be going out of style; (2) the nerve control mechanism. This is also in doubt. There is no proof that it is a direct cause of the observed effect. It might still be the result of vasomotor changes; (3) the remaining explanation is in the field of the hormones. We are here dealing with the complex of hormones. Thyroid does not stand by

itself. It is activated as the result of something preceding it. Whether or not it is primarily anterior pituitary lobe or adrenal is not known and doubt has been thrown on it. The tendency today is not so much in Crile's direction which favors adrenal action first but in the direction of disturbed secretions from the anterior pituitary. In confirmation of the latter view it has been found that transplants of thyroid tissue are markedly affected by extracts of pituitary.

When we try to think in terms of prevention we are thinking of what occurs before pathogenesis has even started. We are concerned of course in the early care of the thyroid case. Strict prevention aims at attacking the disease even before it is a disease. What, then, can we hope to do? Where can we look for our greatest efforts? Since the newest evidence today points toward the hormones and their interrelationship with the sympathetic nervous system, I feel inclined to agree with Dr. Musser; we should turn toward the psychogenic makeup. It may be a very basic fundamental constitutional fact. We would like to have some way of testing these individuals as to their susceptibility to develop thyrotoxicosis somewhat like the method of dipping hands up to wrists in cold water in order to determine instability of the blood pressure. I am pointing that as an example in an attempt to solve the problem before it arises. We know so little about constitutional diathesis that it behooves us all to think seriously of those patients who do not have a thyrotoxic condition but who are showing some of the things which we have seen tonight. This evidence may not be strictly causative. I confess from my own point of view, that I am much more concerned with regard to the habitus before goiter has made its appearance and certainly the thyroid itself does not originate its own disease.

Dr. Ochsner: There are just a few things I would like to emphasize. Whereas I think a surgeon would have been very criticized ten years ago, with reference to Dr. Musser's statement in regard to one of the patients presented, we are becoming more and more convinced that the majority, if the patient lives long enough, will become toxic. We feel that extirpation of this nodule at the present time when the patient is in good condition is practicing preventive medicine. We will, in removing this, prevent occurrence of toxic goiter and the possibility of malignant change. I think that Dr. Menville has been very fair in his evaluation of roentgen ray. Most radiologists say that no one ever dies of roentgen ray therapy. The important thing is that if the patient does not respond, then something else should be done because the patient may not die from roentgen ray but from progression of the disease. That is true not only of thyroid diseases but malignancies. If the condition does not re-

spond, it should not have prolonged roentgen ray treatment. Due to the iodine therapy the necessity for repeated operations is becoming more marked. For instance, many of us know, before the introduction of iodine preoperatively the mortality rate following thyroidectomy was high. With the introduction of iodine therapy the mortality rate fell. We now are seeing individuals who are iodine fast who have been given iodine over long periods of time. They are in much worse shape than patients whom we saw before. While iodine should be given and is curative in adolescent goiter, it should not be prolonged over a long period of time. The incidence of repeated operations necessary in these cases is much higher than before. Dr. Lahey states that in his clinic the number of cases requiring stage operations is approximately 40 per cent. Undoubtedly, it is due to the promiscuous administration of iodine as a preoperative measure. This is particularly important in this type of symposium where all departments are interested. I know of nothing which requires the cooperation between all departments quite as much as thyroid disease and I think we have all gotten a great deal out of the presentation. There is no one method of therapy. We have to distinguish in toxic cases between toxic adenoma and exophthalmic goiter. In toxic adenoma, if the patient is in any shape at all, a cure will be obtained in practically 100 per cent. Although both conditions are toxic, the underlying factor is different. Whether it is originally a fetal adenoma certainly makes the prognosis different from the standpoint of ultimate cure. We feel more and more that these severely toxic cases have to have radical resections. The only recurrences which we have had have been in those cases in which we have not been radical enough. In the very toxic cases, the ultimate goal should be a subtotal thyroidectomy.

#### HOTEL DIEU

The regular monthly meeting of the Staff of Hotel Dieu was held on Monday, March 16, 1936 at 8:00 p. m. in the Nurses' Lecture Room of Hotel Dieu.

The meeting was called to order by the President, Dr. E. H. Walet, and with the Secretary, Dr. J. A. LaNasa, at the desk.

The Scientific Program consisted of:

a. "Psittacosis", by Dr. H. E. Hasseltine, Medical Officer in charge of the Marine Hospital, Carville, La. Discussed by Drs. Dimitry and Unsworth.

b. "Pansinusitis", by Dr. G. Taquino, Discussed by Drs. Dimitry, Levy, Unsworth, and Anderson.

A recess of one minute was ordered by the Chairman after which the meeting resolved into

Executive Session. The meeting was then adjourned.

#### NORTH LOUISIANA SANITARIUM STAFF MEETING

The regular monthly meeting of the North Louisiana Staff was called to order on March 24, 1936, by the President, with 29 members present. After the disposal of routine business, attention was turned to the scientific program.

Dr. L. W. Gorton presented a patient who was of interest due to difficulty in diagnosis. The patient had complained of pain in front of the right auricle for six years and was treated for furunculosis. In November 1935, the patient consulted Dr. Gorton and was treated for an otitis externa due to a fungus infection. Subsequently, on finding a facial nerve weakness, a roentgen ray was taken and revealed a marked involvement of the right mastoid for which an extreme radical mastoidectomy was done. To date the patient has had an uneventful recovery. The case was discussed by Drs. Rigby, Crebbin and Riggs.

Dr. Stamper reviewed the subject of cancer of the prostate and cited several cases of the various types, and presented a patient upon whom he had operated for cancer of the prostate some time ago with satisfactory results. Drs. Edwards and Anderson discussed the treatment of cancer of the prostate by radium and roentgen ray.

H. M. Trifon, M. D., Sec.

#### TRI-STATE HOSPITAL

Following dinner the meeting called to order by Dr. J. E. Knighton, Sr., on March 26, 1936, with 25 members of the regular staff present.

Supplementing the case discussion of the last meeting by Drs. Cole and Gorton, it was reported that the child had dislodged an apple stem from the larynx, since which time an uneventful recovery had been made.

Dr. W. B. Worley presented the case of a white male, 8 years of age, whose symptoms consisted of severe pain in left leg with tenderness over the lower third femur and high fever. A tentative diagnosis of osteomyelitis was not confirmed and the patient later developed multiple abscesses and pyuria. It is evident that *Staphylococcus albus* septicemia exists and fair progress is being made with supportive treatment.

Dr. Thos. J. Bush reported a case of diverticulitis with partial intestinal obstruction in the sigmoid region, which was due to inflammatory stages about the diverticulum. At operation it was possible to remove the inflammatory mass and the diverticulum with resultant alleviation of symptoms and prompt recovery.

Dr. J. E. Knighton, Jr. reported a case of splenomegaly and widespread lymph glandular enlargement in a white male 33 years of age. Several



conflicting statements in the history and abnormal physical findings confused the diagnosis of Hodgkin's disease, but autopsy findings proved this to be correct.

These cases were discussed by various members of the staff.

After discussion of the statistical and mortality reports the meeting adjourned. The next meeting will be held April 23, 1936.

J. E. Knighton, Jr., M. D., Acting Sec.

#### THE SHREVEPORT EYE, EAR, NOSE AND THROAT SOCIETY

The Shreveport Eye, Ear, Nose and Throat Society met in regular session at the Charity Hospital, the evening of Monday, April 6, 1936, at 7:30 o'clock. The president, Dr. L. W. Gorton presided. The following members were present: Drs. Mann and Kirkpatrick from Texarkana, Ark.; Dr. Smith of Magnolia, Ark.; and Drs. Atkins, Crebbin, Bean, Boaz, Gorton, and Wilkinson, of Shreveport, La.

The scientific program consisted of seven cases:

1. Dr. Atkins presented an interesting eye case in a young colored woman. Although of rare occurrence, it was generally conceded to be retinitis proliferans.

2. Dr. Mann presented an interesting case of trachoma of about thirty years' duration. The conjunctiva was remarkably clear for such a protracted case.

3. Dr. P. M. Smith presented an interesting nose lesion in a white man of 76 years of age.

There was ulceration and scabbing of the nasal septum which had refused to heal from any treatment that had been given. On account of his age and several skin lesions about the face it was thought most likely that his trouble was an epithelioma.

4. Dr. Eoaz presented a case of trachoma. He also presented a traumatic injury of the eye in which there was perforation of the cornea and herniation of the iris in which no medical treatment had been given. The unusual feature was that nature had provided a conjunctival flap and the wound had healed completely.

5. Dr. Gorton presented two cases of keratitis, which had not yielded to treatment over a period of about three months. There was lengthy discussion as to the classification and further treatment of these cases.

A letter from Mrs. William A. Porteous, Secretary of the Louisiana Society for the Prevention of Blindness, was read and discussed. It was moved and seconded that the various oculists of the city be requested to list all patients having a vision of less than 20/70 or better than 20/200 after correction with glasses, and that they be reported to Dr. Wilkinson, who will in turn notify the local chairman of the Society for the Prevention of Blindness.

The secretary was authorized to have necessary cards printed for the notification of meetings and present the bill for same at the next meeting of the Society.

J. A. Wilkinson, M. D., Sec.

### TRANSACTIONS OF ORLEANS PARISH MEDICAL SOCIETY

#### CALENDAR

MAY 1. Pathological Conference, Hotel Dieu, 11 A. M. to 12 Noon.

MAY 4. Board of Directors, Orleans Parish Medical Society, 8 P. M.

MAY 4. Eye, Ear, Nose and Throat Hospital Staff, 8 P. M.

MAY 6. Clinico-Pathological Conference, Touro Infirmary, 11:15 A. M. to 12:15 P. M.

MAY 6. Board of Governors, 1st and 2nd District Dental Society, 8 P. M.

MAY 6. Mercy Hospital Staff, 8 p. m.

MAY 8. Pathological Conference, Hotel Dieu, 11 A. M. to 12 Noon.

MAY 11. ORLEANS PARISH MEDICAL SOCIETY, 8 P. M.

MAY 12. Charity Hospital Dental Staff, 8 P. M.

MAY 13. Touro Infirmary Staff, 8 P. M.

MAY 15. Pathological Conference, Hotel Dieu, 11 A. M. to 12 Noon.

MAY 15. French Hospital Staff, 8 P. M.

MAY 18. Hotel Dieu Staff, 8 P. M.

MAY 19. Charity Hospital Medical Staff, 8 P. M.

MAY 20. Clinico-Pathological Conference, Touro Infirmary, 11:15 A. M. to 12:15 P. M.

MAY 20. Charity Hospital Surgical Staff, 8 P. M.

MAY 20. 1st and 2nd District Dental Society, 8 P. M.

MAY 21. Eye, Ear, Nose and Throat Club, 8 P. M.

MAY 22. Pathological Conference, Hotel Dieu, 11 A. M. to 12 Noon.

MAY 22. I. C. R. R. Hospital Staff, 12 Noon.

MAY 25. ORLEANS PARISH MEDICAL SOCIETY, 8 P. M.

MAY 26. Baptist Hospital Staff, 8 P. M.

MAY 27. Clinico-Pathological Conference, Touro Infirmary, 11:15 A. M. to 12:15 P. M.

MAY 29. Pathological Conference, Hotel Dieu, 11 A. M. to 12 Noon.

During the month of April, besides the regular meeting of the Board of Directors, the Society

held one joint scientific and first quarterly executive meeting and one special meeting. The Board of Directors held one special meeting to discuss the Social Security Act.

The meeting of April 13 was dedicated to Safe Driving, and the following program was presented: The New Pharmacopoeia.

By:..... Dr. Oscar W. Bethea

#### SAFE DRIVING

Neuro-Psychiatric Aspect: By Dr. Frederick L. Fenno.

Surgical Point of View: By Dr. Emmett Irwin.  
Vision: By Dr. Chas. A. Bahn.

Medical Viewpoint: By Dr. Shirley C. Lyons.  
Motion Picture.

Recapitulation: By Dr. James T. Nix.

Reports of the Officers and special and standing committees for the first quarter were read.

The following resolution incorporating the fundamentals of Safe Driving were presented by Dr. Jos. C. Menendez:

WHEREAS, there is at present being conducted throughout this city and state a campaign to support safe driving measures, and

WHEREAS, the safety committee of the Orleans Parish Medical Society has closely studied the efforts being made in this campaign, and

WHEREAS, the safety committee has suggested that the campaign be extended to enhance the physical, mental, moral, and medical qualifications of the applicant, therefore,

BE IT RESOLVED, that the Orleans Parish Medical Society go on record as endorsing the safe driving movement; that the members of the Society, will by their conduct, influence, and example, lead the way to safe driving; that the Society will work and cooperate with the officials in charge of this movement and with all civic bodies so engaged; that the Orleans Parish Medical Society offer and stand ready to work out any medical problems that may arise in the course of the campaign.

BE IT FURTHER RESOLVED, that copies of this resolution be made, and placed on record with the authorities in charge.

A special meeting of the Society was called by the President for April 20. The following program was presented:

Childhood Tuberculosis.

By:..... Dr. Horton Casparis  
Professor of Pediatrics, Vanderbilt University.  
The Diagnostic and Prognostic Significance of Positive and Negative Sputum.

By:..... Dr. Max Pinner  
New York State Tuberculosis Hospital, Oneonta, New York.

Epidemiologic Aspects of Tuberculosis.

By:..... Dr. P. P. McCain  
Superintendent and Medical Director of the

North Carolina Sanatorium, Sanatorium, N. C.  
Compression Therapy.

By:..... Dr. L. J. Moorman,  
Past President of the Southern Medical Association, Dean, Medical School University of Oklahoma, Oklahoma City, Okla.

The regular meeting scheduled for April 27 was dispensed with because of confliction with the meeting of the Louisiana State Medical Society at Lake Charles.

At the organization meeting of the Louisiana-Mississippi Ophthalmological and Otolaryngological Society held recently at the St. Charles Hotel, Dr. J. Raymond Hume was elected President and Dr. Val. H. Fuchs was elected a Councillor.

The following doctors were elected to Active Membership and introduced to the Society at the meeting of April 13: Drs. Frank F. Gambino, Jr., Henry D. Ogden and Meyer D. Teitelbaum.

Dr. Hans Schroeder resigned from Active Membership because of removal to California.

Dr. Daniel N. Silverman was notified of his election to the International Society of Gastro-Enterology. This appointment followed a meeting of the International Congress of Gastro-Enterology which met in Brussels last year.

#### TREASURER'S REPORT

ACTUAL BOOK BALANCE 2/29/36 .....	\$ 2,055.23
March Credits.....	\$ 1,776.04

TOTAL CREDITS .....	\$ 3,831.27
March Expenditures .....	\$ 1,123.85

ACTUAL BOOK BALANCE 3/31/36 .....	\$ 2,707.42
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#### LIBRARIAN'S REPORT

During March 45 books were added to the Library. Of these 2 were received by purchase, 6 by binding, 16 by gift and 21 from the New Orleans Medical and Surgical Journal. Notation of new titles of recent date is given below.

The Library has loaned 765 books and journals to doctors during the month, or approximately 1½ to each member of the Society. In addition 1383 volumes were loaned to students for overnight use, making a total of 2148. These figures do not include the great use of books and journals within the Reading Rooms.

On request of physicians, members of the staff have collected material on the following subjects in March:

Liver extract in hemophilia.  
Lymphatic-venous fistula.  
Haemolymp nodes.  
Medico-legal aspects of electric burns.

Hospital libraries.  
 Lower uterine segment.  
 Accident prevention.  
 Therapeutic fever in nervous and mental diseases  
 Blindness in migraine.  
 Medical, psychiatric, surgical, ophthalmologic aspects of requirements for drivers' license.  
 Adenocarcinoma of bladder.  
 Roman and Grecian baths.  
 Method of staining a diabetic pancreas.  
 Diathermy in cardio-respiratory diseases.  
 Chemical bronchitis.  
 Vomiting in pregnancy.  
 Anesthesia and analgesia in labor.  
 Fibroma of ovary.  
 Uterine bleeding.  
 Cyclopropane.  
 Merthiolate.

## NEW BOOKS

Jameson, Edwin—Gynecological and Obstetrical Tuberculosis. 1935.  
 Sherwood, N. P.—Immunology. 1935.  
 Slemons, J. M.—John Whitridge Williams. 1935.  
 Dick, G. F. ed.—Yearbook of General Medicine. 1935.  
 Mary Imogene Bassett Hospital—Clinical Miscellany. v. 2. 1935.  
 Beaumont, G. E. R.—Recent Advances in Medicine. 1936.  
 U. S. Navy Dept.—Statistics of Diseases and Injuries in U. S. Navy. 1935.  
 American Neurological Association—Transactions. 1935.  
 DeRivas, Damaso—Clinical Parasitology and Tropical Medicine. 1935.

Potter, P. S.—Pediatric Treatment. 1935.  
 Singer, Edward—Fasciae of Human Body and their Relations to the Organs they Envelop. 1935.  
 Katzenboger Solomon—Cerebrospinal Fluid in its Relation to the Blood. 1935.  
 Zilboorg, Gregory—Medical Man and the Witch During the Renaissance. 1935.  
 Cameron, D. E.—Objective and Experimental Psychiatry. 1935.  
 Clark, W. I.—Industrial Medicine. 1935.  
 Myers, J. A.—Diseases of the Chest. 1935.  
 Greenhill, J. P.—Obstetrics for the General Practitioner. 1935.  
 Haggard, W. D.—Surgery, Queen of the Arts. 1935.  
 Duncan, G. G.—Diabetes Mellitus and Obesity. 1935.  
 Allison, Nathaniel—Diagnosis in Joint Diseases. 1931.  
 Shelling, D. H.—Parathyroids in Health and Disease. 1935.  
 Baumgartner, Leona—Bibliography of the Poem Syphilis. 1935.  
 Weisenburg, Theodore—Aphasia. 1935.  
 Haynes, William—Men, Money and Molecules. 1934.  
 Claoue, C.—Donnees anatomiques en vue de la chirurgie reparatrice mammaire. 1935.  
 Douglass, S. A.—Organization of a Rural Tuberculosis Service. 1930.  
 Milbank Memorial Fund—Review. 1936.  
 U. S. Public Health Service—State and Territorial Health Officers—Transactions. 1935.  
 Gilbert C. Anderson, M. D.,  
 Secretary.

## LOUISIANA STATE MEDICAL SOCIETY NEWS

## LAKE CHARLES MEETING

The Lake Charles meeting is being held while the Journal is in press consequently it will be impossible to do anything but forecast as to what happens at the meeting. From all indications this meeting promises to be one of the largest and most successful ever held in this State. The local Committees have worked hard and faithfully and have prepared an excellent program and social events. The Chairmen of the Sections have also arranged a program of scientific interest that has rarely been equaled at a Louisiana State meeting. Altogether if the weather is propitious and if the epidemic continues to decline a very large number of doctors throughout the State will enjoy the features of reason, science and sociability that have been prepared for them.

## AMERICAN MEDICAL ASSOCIATION MEETING

The Annual Meeting of the American Medical Association will be held in Kansas City the week

of May 11. A very splendid program has been provided which includes scientific and economic presentations and social events. Clinics have been arranged just previous to the opening session on Monday of that week and as usual the scientific exhibits will be outstanding. This is undoubtedly the meeting of the year and no medical man should afford to miss it.

## THE AMERICAN ASSOCIATION FOR THE STUDY AND CONTROL OF RHEUMATIC DISEASES

The American Association for the Study and Control of Rheumatic Diseases is holding its fifth conference on rheumatic diseases at the Phillips Hotel, 3rd floor, on May 11 at 9 o'clock in Kansas City. There are on the program such well known men as Drs. Russell Haden, Joseph L. Miller, Frank D. Dickson, Ralph A. Kinsella, Philip S. Hench, William J. Kerr.



### AMERICAN MEDICAL GOLFING ASSOCIATION

The American Medical Golfing Association will hold its twenty-second annual tournament at the Mission Hills Country Club and the Kansas City Country Club in Kansas City on Monday, May 11, 1936. There will be seventy trophies and prizes contested for. All male Fellows of the A. M. A. are eligible if they belong to the Association. The Executive Secretary, Dr. William Burns, 2020 Olds Tower, Lansing, Michigan will supply necessary application blanks to be filed before obtaining membership.

### AMERICAN HEART ASSOCIATION, INC.

The twelfth Scientific Session of the American Heart Association will be held on Tuesday, May 12, 1936, from 9:30 to 5:30 p. m., at Hotel Phillips, Kansas City, Missouri. The program will be devoted to cardiac insufficiency.

### THE AMERICAN PUBLIC HEALTH ASSOCIATION

The oldest and most powerful association of public health workers in the United States will meet in New Orleans, October 20, for its 65th Annual Meeting. Representatives from every State in the Union and from many of the countries in the Americas and from the various branches of Federal, State and other health departments will meet at this time. The new Surgeon General of the United States Public Health Service, Dr. Thomas A. Parran, Jr., is President-Elect of the Association.

### OTHER MEETINGS

The First International Congress of Sanatoria and Private Nursing Homes will be held in Budapest, September 1936.

The National Conference of Social Work will meet in 63rd Annual Convocation at Atlantic City May 24-30.

The Annual Meeting of the American Association for the study of Goiter will be held in Chicago, June 8-10. Papers will be presented by such distinguished students of goiter as: Collip, of Montreal; Pemberton, of Rochester; Means, of Boston; Coller, of Ann Arbor and Lerman, of Boston.

### NEWS ITEMS

Past Assistant Surgeon D. C. Elliott has been relieved from duty at the United States Marine Hospital, New Orleans and assigned to the Scientific Research Division.

Surgeon O. E. Denny has been relieved from duty at the United States Quarantine Station, New Orleans and has been directed to report to

the Governor of the Panama Canal Zone for duty as Chief Quarantine Officer.

Assistant Surgeon Charles F. Blankenship has been relieved from duty at the United States Marine Hospital.

Past Assistant Surgeon F. S. Fellows has been relieved from duty at the United States Marine Hospital.

The following Louisiana doctors have appeared on the program of the meeting of the Medical Association of the State of Alabama from April 21 to 23, 1936: Dr. Edgar Burns, "Surgery of the Prostate"; Dr. John H. Musser, "Abdominal Pain Due to Extra-Abdominal Conditions"; Dr. Francis E. Lejeune, "The Human Larynx: Motion Picture Demonstration."

### BROADCASTS FROM THE KANSAS CITY SESSION

Special radio programs will be broadcast from Kansas City during the week of the annual session.

#### NATIONAL BROADCASTING COMPANY

The following programs will be delivered over a network of the National Broadcasting Company:

May 11, 4:30 p. m.: "Nutrition and the Future of Man," by Dr. James S. McLester, President of the American Medical Association. Fifteen minutes.

May 12, 4 p. m.: Medicine Marching Forward. The regular dramatized program Your Health (originating in Chicago), based on papers or exhibits presented at the convention. Thirty minutes.

May 13, 12 noon: An interview about the Scientific Exhibit with Dr. Morris Fishbein. Fifteen minutes.

#### COLUMBIA BROADCASTING SYSTEM

The following programs will be broadcast over a network of the Columbia Broadcasting System:

May 11, 1:30 p. m.: An interview with one or more distinguished foreign visitors by Dr. Morris Fishbein. Subject to be announced. Fifteen minutes.

May 15, 2 p. m.: A news broadcast outlining the main events of the convention. Dr. W. W. Bauer. Fifteen minutes.

May 15, 8:45 p. m.: Medicine Yesterday and Today. A dramatized program (originating in Chicago), based on papers or exhibits presented at the convention. Thirty minutes.

The hour given is central standard time; eastern standard time is one hour later, mountain time one hour earlier, and Pacific time two hours earlier.

### INFECTIOUS DISEASES IN LOUISIANA

Dr. J. A. O'Hara, Epidemiologist for the State of Louisiana, has furnished us with the weekly

morbidity reports for the State of Louisiana, which contain the following summarized information: For the week ending March 21, the grip epidemic which has been raging was still unabated, there being 385 cases of influenza listed this week as contrasted with 111 the previous week. Other diseases listed in double figures included 84 cases of measles, 47 of pneumonia, 40 of syphilis, 23 of malaria, 28 of whooping cough, 18 of pulmonary tuberculosis, 15 each of scarlet fever and diphtheria and 14 each of chickenpox and cancer. Of the unusual diseases there was 1 case of undulant fever, 1 of encephalitis and 2 of meningitis, all from Orleans Parish. For the week ending March 28 there was a slight decrease in the number of cases of influenza, there being 279 reported. This week pneumonia reached the very high figure of 112 cases, many of which were probably influenzal pneumonia. Seventy-five cases of syphilis appeared in the list and 90 cases of measles. Other important diseases include 82 cases of whooping cough, 54 of chickenpox, 35 of pulmonary tuberculosis, 26 of malaria, 22 of scarlet fever and 14 of cancer. Three cases of meningitis, all from Orleans Parish. For the smallpox was reported from Iberville Parish. This week there was a larger number of contagious diseases reported than had been reported for a very long while. The grip epidemic apparently reached its peak the week ending April 4. There were 606 cases of influenza reported during this week. Pneumonia had fallen to 81 cases and there was a decrease in the other reportable diseases. Those in double figures were 67 cases of measles, 37 of malaria, 34 of tuberculosis, 31 of whooping cough, 24 of chickenpox, 18 of cancer, 14 of syphilis, 12 of septicemia and 10 of scarlet fever. There was 1 case of anthrax reported from St. Bernard Parish and 3 cases of meningitis reported this week. For the week ending April 11 the number of reported cases of influenza dropped to 291. The incidence of pneumonia also had fallen as only 66 cases were put down for this week. Other reportable diseases were 84 cases of syphilis, 62 of measles, 46 of whooping cough, 32 of malaria, 15 of scarlet fever and 12 of pulmonary tuberculosis. Two cases of cerebrospinal meningitis were reported from Orleans Parish. There seems to be an increase in the number of cases of meningitis. At the present time in the wards at Charity Hospital, for contagious diseases, there are 11 cases, a very unusual number.

#### HEALTH OF NEW ORLEANS

The Department of Commerce, Bureau of Census reports that for the week ending March 14 there were 197 deaths in New Orleans giving a death rate of 21.4. Of these deaths, 119 occurred

in the white population and 78 in the colored, with a death rate for the first group of 18.2 and for the last 29.2. The infant mortality rate this week was 93. For the week ending March 21 the deaths totaled 198, divided 120 white and 78 colored. The rate for the three groups respectively was 21.5, 18.3 and 29.2. Infant mortality rate was 110 for this week. For the week ending March 28 there was listed the large number of 223 deaths, giving a death rate of 24.2. Amongst the white population there were 117 deaths with a rate of 17.9 and in the negro race there were 106 deaths with a death rate of 39.7. The infant mortality rate was 128. For the succeeding week, ending April 4, the death rate was still large, 247 deaths having taken place, of which 148 were in the white and 99 in the colored population of New Orleans. The total death rate was 26.8; for the white 22.6 and for the colored 37.1. The infant mortality rate this week was 134. So far this year the death rate for New Orleans is 20.8 contrasted with a rate of 17.5 last year.

#### WOMAN'S AUXILIARY

##### Louisiana State Medical Society

President—Mrs. Hermann B. Gessner, New Orleans.  
 President-Elect—Mrs. James Byron Vaughn, Monroe.  
 1st. Vice-President—Mrs. Samuel B. Kreeger, Lake Charles.  
 2nd. Vice-President—Mrs. L. E. Shirley, Jennings.  
 3rd. Vice-President—Mrs. D. T. Milam, Monroe.  
 4th. Vice-President—Mrs. Harry R. Marlatt, Homer.  
 Treasurer—Mrs. Jos. E. Heard, Shreveport.  
 Recording Secretary—Mrs. James W. Warren, New Orleans.  
 Corresponding Secretary—Mrs. H. Vernon Sims, New Orleans.  
 Parliamentarian—Mrs. C. E. Rew, Shreveport.

##### Ouachita Parish

The Woman's Auxiliary to the Ouachita Parish Medical Society held its regular monthly business meeting at the Business and Professional Woman's Club with Mesdames O'Donnell, Jancey and Johnson, acting as hostesses. A most interesting program was rendered. The President, Mrs. J. Q. Graves and her staff extended their greetings and best wishes to the new officers for 1936, who were accepted. The following officers were elected:

President—Mrs. J. P. Brown.  
 1st. Vice-President—Mrs. A. L. Peters.  
 2nd. Vice-President—Mrs. A. D. Tisdale.  
 Treasurer—Mrs. I. J. Wolff.  
 Recording Secretary—Mrs. D. T. Milam.  
 Corresponding Secretary—Mrs. Henson Coon.  
 Publicity Secretary—Mrs. W. L. Bendel.  
 Historian—Mrs. P. L. Perot.  
 Parliamentarian—Mrs. E. R. Yancey.

Complete plans were made for our honoring and celebrating Doctor's Day which we celebrated on March 29th. We had our daily papers print an editorial taken from the February issue of "Hygeia" which paid homage to the men of their profession. A most delightful and enjoyable informal tea was given at the Lotus Club from the hours of four to seven o'clock for the doctors. Early Sunday afternoon, they received most attractive butonnieres as a reminder of the party that was given in their honor. Thirty doctors and their wives enjoyed the most outstanding festivity of the year.

Mrs. D. T. Milam,  
Publicity Chairman.

#### Orleans Parish

At the April meeting of the Woman's Auxiliary to the Orleans Parish Medical Society the auxiliary entertained at its annual "Mother's Party" having as guests of honor, the mothers of the members and mothers of the doctors of the Orleans Parish Medical Society. Each guest of honor received a sweet-pea corsage.

Dr. Ellsworth Woodward of Newcomb College gave a very interesting talk on art and Miss Frances Gayle Pickering played several very beautiful piano selections.

We were very proud to present to the Orleans Parish Medical Society Library, a check for one hundred dollars (\$100.00) for the re-conditioning and re-binding of medical magazines.

The Doctor's Day "Leap Year" Party which was celebrated on March 30th was a huge success, in spite of the fact that a number of our guests were called away by their patients. We hope that this party will be a forerunner of what next year's celebration will be.

The delegates and alternates to the State Convention in Lake Charles will be Mesdames: M. Earle Erown, Wiley R. Buffington, George D. Feldner, Hermann B. Gessner, Charles Holbrook, Chaille Jamison, Shirley Lyons, A. L. Levin, William Warren.

Mrs. Ralph J. Christman,  
Publicity Chairman.

#### Caddo Parish

The Woman's Auxiliary to the Shreveport Medi-

cal Society has had a very active Committee on Philanthropy this year. Free tonsillectomies and private hospitalization for children was obtained. The attending specialists and sanitariums contributed their services free of charge. Each member of the auxiliary was contacted and requested to save small bottles, cold cream jars and all containers of such size which could be used in the distribution of medicinal supplies provided for the indigent sick by the Caddo Parish Charity Medical Unit. These articles were collected and delivered to the above mentioned organization.

Clothes and food have been provided regularly for a widow and two little daughters. They also received a Christmas box including toys. A short time ago, a position was obtained for this mother which now enables her to be self-supporting.

Mrs. Johnson R. Anderson,  
Publicity Chairman.

#### CLAIBORNE PARISH

The Woman's Auxiliary to the Claiborne Parish Medical Society met on Friday, April 10 in the home of Mrs. E. B. Middleton, Homer.

The Auxiliary entertained the doctors of Claiborne Parish on March 30, this being the day set aside nationally to honor the doctors, both living and dead.

Mrs. H. R. Marlatt, President, presented the auxiliary with a beautiful hand-made crocheted rug, for the purpose of raffling to increase funds for the treasurer. Mrs. F. Palmer of Homer was appointed chairman and a report that the chances were disposed of and \$25.00 was raised, was made.

Claiborne Parish Auxiliary now one year old plans many activities for the coming year.

Mrs. C. W. Phillips,  
Publicity Chairman.

Dear Auxiliary Members:

By the time you will have received this issue of the Journal, my office as Publicity Chairman for the state will have expired. I want to take this opportunity to thank each auxiliary for the splendid co-operation and assistance they have rendered throughout the past year, and sincerely trust that the interesting articles portraying the activities of our sister auxiliaries have been beneficial to everyone.

Alma W. Feldner  
(Mrs. George D. Feldner)



## BOOK REVIEWS

*Lobar Pneumonia and Serum Therapy:* By Frederick T. Lord, M. D. and Roderick Heffron, M. D. New York, The Commonwealth Fund, 1936. pp. 91. Price \$1.00.

This little book of some 90 pages on lobar pneumonia and serum therapy is full of interesting and valuable information. It is based upon the Massachusetts Pneumonia Study begun in 1931. The first half of the book takes up etiology, factors influencing recovery, types of pneumococci and their identification, and clinical diagnosis. The authors stress the Neufeld method for rapid identification of types. The Massachusetts statistics are in accord with other eastern statistics in demonstrating that, of the 32 types thus far isolated, types I and II are together responsible for about 60 per cent of the cases of lobar pneumonia. The last half of the book considers in a clear and lucid manner precautions to be taken prior to serum administration, proper technic of serum administrations and generally accepted dosages of types I and II serum. Serum reactions and their treatment are also adequately considered. Finally, the results of serum treatment in type I when begun within 96 hours show a death rate of 11.1 per cent in serum treated cases against 25 per cent in cases not treated with serum. In type II the death rate is higher in both groups but still strikingly less in those treated with serum.

The book is a strong plea for the more frequent and earlier use of serum in properly selected cases. This book can be highly recommended to all practitioners who come in contact with many cases of lobar pneumonia. The chapters of contra-indications, proper administration and dosage of serum will many times repay the buyer for the small cost of the book.

RANDOLPH LYONS, M. D.

*Diseases of Women:* By Harry Sturgeon Crossen, M. D., F. A. C. S. and Robert James Crossen, M. D. 8th ed. St. Louis, C. V. Mosby Co., 1935. pp. 999. Price \$10.00.

This standard textbook has been entirely revised in the eighth edition. The chapter on anatomy and physiology is presented in an excellent manner; and in the opinion of the reviewer the best that has been published in modern gynecological text, being thorough, concise, and "up to the minute". Chapter two, on gynecological pathology, is a veritable library of excellent photomicrographs with explanatory notes surpassing anything that the reviewer has seen in any volume on gynecology. The remainder of the book devoted to diagnosis and some treatment is up to

the high standards found in the previous edition. En passant, it must be said that the classification of ovarian tumors appearing in this work is excellent from an embryological, physiological, and pathological standpoint.

CONRAD G. COLLINS, M. D.

*Regional Anatomy:* Adapted to dissections, By J. C. Hayner, B. S., M. D. Baltimore, William Wood and Co. 1935. pp. 687. Price \$6.00.

This is not a book intended to supplant any standard text of anatomy dissecting manuals, or books on surgical anatomy but rather is intended to be used for review. The subject matter is not discussed in systems, as muscular or vascular as in most anatomy books but in parts as the perineal region and epigastric region where nerves, muscles, vessels, and are discussed in the same chapter. This book contains no illustrations and anatomy is discussed only in the gross and never in great detail. This book can be of value when one is looking for a condensed connected anatomy for quick review.

LOUIS BRISTOW, M. D.

*The Pathology of Internal Diseases:* By William Boyd, M. D., M. R. C. P., Ed. F. R. C. P. (Lond.) Dipl. Psych., F. R. S., Can., 2nd Ed. rev. Philadelphia, Lea & Febiger, 1935. pp. 904. Price \$10.00.

In this second edition there has been a great deal of revision, and a very fine reference book has been made into one almost indispensable to the practitioner of medicine. As one reads this book it is almost unbelievable to realize that this is the cut and dried pathology of yesteryear. Embroadened in its scope, it now becomes a sentient thing. The author has developed his subject along physiological lines and the invaluable part of the discussion of each disease is the relationship of symptoms to pathology which he has so masterfully presented. It would be folly for the reviewer to evaluate critically the pathological material in the book. From those in the know he is willing to accept the work as that of a profound scholar. The historical allusions and personal experiences are excellently chosen.

I. L. ROBBINS, M. D.

*Infant Nutrition:* By Williams McKim Marriott, B. S., M. D. 2nd Ed. St. Louis, The C. V. Mosby Company, 1935. pp. 431. 27 illus. Price \$4.50.

This is the second edition of a work which served to clarify and crystalize our knowledge of

infant nutrition when it appeared several years ago. Few men in modern pediatrics have dedicated more of their time to the study of nutrition and nutritional disturbances than Marriott. Being an unusual combination of biochemist and clinician, he has been able to direct and interpret the results of investigations both in the laboratory and at the bedside. Moreover, has been fortunate in having men on his staff who have conducted studies which have proved to be of inestimable value to throw light on the subjects included in this book.

While this edition follows the general lines of the first, the size of the book has been decreased so that it is more convenient to handle. Most of it has been completely rewritten or revised. Special attention has been given to the subject of acidosis, alkalosis, and anhydremia, and they have been more intimately incorporated in the chapters on Diarrhea and Vomiting, instead of discussing them separately. In addition to a chapter on Allergy, a chapter on Miscellaneous Pediatric Technic has been added.

This book is recommended to students and physicians alike, with full assurance that it contains the modern conception of infant nutrition and nutritional disturbances of early life.

ROBERT A. STRONG, M. D.

*Handbook of Anesthetics:* By J. Stuart Ross, M. B., Ch. B., R. F. C. S. F. & H. P. Fairlee, M. D. 4th ed. Baltimore, William Wood & Co. 1935. pp. 300. Price, \$4.00.

This book is just what the title indicates,—a handbook of anesthetics. While the general outline of it is good, a great deal of it is out of date. The chapter on ethylene is good and yet the author gives the preference to nitrous oxide in most cases.

Shock, operative and post-operative, is one of the chief concerns of the anesthetist. The chapter on shock is concise and interesting.

The chapter on blood gases is complete, especially that part on anoxemia.

While the authors caution against the dangers of chloroform they find a great many more indications for its use than we recognize. The reviewer can see no necessity for the use of chloroform except where the cautery is to be used about the face or the respiratory tract, and even then avertin and nitrous oxide can usually be substituted.

The entire chapter on choice of anesthetic could be re-written to advantage. Certainly the anesthetic of choice for old people should not be a chloroform and ether mixture.

This is the fourth edition of the book. While it has been revised and more or less brought up to date, it gives every evidence of having the groundwork of the first edition. There are many

things in the book that will always be true, but there have possibly been more advances in anesthesia in the last few years than in any other branch of medicine. The book could probably be rewritten to advantage.

LILY L. DISMUKES, M. D.

*A Doctor's Odyssey:* A Sentimental Record of Le Roy Crummer, Physician, Author, Bibliophile, Artist in Living, 1872-1934. By. A. Gaylord Breaman, Baltimore, John Hopkins Press, 1935. pp. 340.

This small volume of three hundred pages is divided into different parts. In the opening part the author gives a brief account of Dr. Crummer's family, his early life and education. The second part deals with his practice and his teaching. Here is to be found some sound advice.

The rest of the book gives interesting accounts of his book collecting through Europe, numerous letters from and to Dr. Crummer and editorials and writings about his books and work.

This is a book that can be read with pleasure and profit.

J. M. BAMBER, M. D.

#### PUBLICATIONS RECEIVED

Hale, Cushman & Flint, Boston: Bewildered Patient by Marian Staats Newcomer, M. D.

P. Blakiston's Son & Co., Inc., Philadelphia: Evans' Recent Advances In Physiology, Fifth edition, revised by W. H. Newton M. D., M. Sc. (Manch.)

The H. W. Wilson Company, New York: The Cumulative Book Index, 1935, Edited by Mary Burnham.

Lea & Febiger, Philadelphia: Basal Metabolism in Health and Disease by Eugene F. DuBois, M. D.

D. Appleton-Century Company, Inc., New York: Preventive Medicine and Hygiene by Milton J. Rosenau.

Charles C. Thomas, Springfield: American Martyrs to Science Through the Roentgen Ray by Percy Brown, M. D., F. A. C. P., F. A. C. R. Farrar & Rinehart, New York: American Chamber of Horrors by Ruth de Forest Lamb.

The C. V. Mosby Co., St. Louis: Pediatric Nursing by John Zahorsky, A. B., M. D., F. A. C. P.

Lea & Febiger, Philadelphia: Roentgenographic Technique by Darmon Artelle Rhinehart, A. M., M. D., F. A. C. R.

William Wood & Company, Baltimore: A Treatise on Medical Jurisprudence by Benton S. Oppenheimer, LL. B., LL. M. of the Cincinnati Bar. Demonstrations of Physical Signs in Clinical Surgery by Hamilton Bailey, F. R. C. S. (Eng.)

D. Appleton-Century Co., New York: The Balanced Diet by Logan Clendening, M. D.

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## THE DOCTOR AND THE PUBLIC\*

C. P. GRAY, M. D.  
MONROE, LA.

It is with deep appreciation that I feel privileged to act as spokesman for the medical profession of this State, especially as appertaining to the present condition of medicine and medical practice. The entire group of practitioners throughout the United State constitute but 15 out of every 10,000 of the population. Though their numbers be relatively small, they are as important to social welfare as the vastly greater numbers engaged in banking, marketing, industry and other factors.

This point may not be so well understood, even by physicians themselves. It is only in sickness that the doctor looms as an essential member of the community, and in times of epidemic and widespread catastrophe as well. If the hands of the profession were removed from society it would be like the loss of the safety valve or the breaking down of dams, leading to inundation of epidemic ruin. The future of medicine lies within the hands of every physician. The task of every member of organized medicine today is to know the trends in medicine, the present tendencies in health insurance and contract practice, and towards every other method which has for its object the profit of lay promoters and lay organizations in the health field, at the expense of the public and of the profession.

There are certain changes being proposed, based primarily on financial or economic distress instead of the good of the general public. There are clever industrial magnates who are trying to introduce mass production methods

for our profession. Then there are politicians who are seeking to prescribe government medicine and to give us a paternal administration through the doctors' help. The lesson of life insurance and fraternal and mutual protection has not been a failure. The manager type of movement must arouse the physician's genuine concern, for it is based on the hope of profit, as is all insurance medicine. Scores of contract schemes have been evolved in which the middleman profits. Still, the movement is well under way for many insurance, industrial-contract, government, fraternal and other forms of medicine in America and abroad. The medical fee is usually dictated by the company; the physician often capitulates to the personal need of funds.

It should be realized in the clearest manner that the general practitioner is the backbone of the medical profession. The most colorful picture is that of the family doctor, the type who renders individual service, and not the man who is compelled to make a trade of it handling as many as fifty patients a day in a hasty way through some manager's office thus leaving the doctor in an exhausted state and unable to give personal consideration to each patient. Experience abroad proves that an army of lay workers exceeds the number of physicians employed, these being government employees who often direct the activities of the medical men in the field. However, high professional standards cannot survive the blight of bureaucratic control and politics. The highest type of manhood rebels at direction by political chicanery. Such changes as are needed ought to be worked out by the profession itself instead of being revolutionized by lay organizers. The men who are devoting their lives to the care of the sick in the respective communities and are con-

\*Presidential address delivered before the Louisiana State Medical Society, April 27-29, 1936.



stantly confronted with matters of life and death ought to be permitted to solve their problems through their own collective wisdom, whether through local, county, state or national associations of doctors and surgeons.

The profession has always been placed above commercialism, inasmuch as the service is a very human and vital one. Throughout the ages, the doctor has given freely when his aid and attention could not be purchased. Medical charity is something that is required by a goodly proportion of our people at present, this being a situation that will tend to be less a problem as the state of the country improves. It is estimated that 30 per cent of the population pays nothing for hospital services. In private practice as well, the medical profession gives freely.

The profession has been, notwithstanding, the target of severe criticism. The vast majority of physicians have shown the effort, progress and efficiency of scientific humanitarians. Medicine today is not a mere matter of dispensing doses. Such rapid progress has been made in the science, and specialization has proceeded with such a pace, that medical service has necessarily become more expensive in the fields of diagnosis, roentgen ray treatment, immunization and other departments requiring apparatus and aids, hospital treatment and nurses and the like, including further study and scientific research and attendance at clinics. The physician is obliged to take opportunities for reading, study and post-graduate courses. He also has to utilize laboratory facilities to allow him to practice his art as he was taught in the medical school and in the hospital, so as to arrive at correct diagnoses. Consequently he is obliged to call for some compensation if he is going to assure the public of the best in health guidance, prevention and care in illness, if he is to retain for himself a dignified and honorable position in the community.

Specialism has expanded beyond its primary forms in surgery to include internists, gynecologists, obstetricians, genito-urinary surgeons, pediatricists, orthopedic and neurologic surgeons, roentgenologists and psychiatrists, so that the universal mind of medicine is an almost impossible ideal. While specialism has been

somewhat retarded since the early twenties, it is bound to come to its own in time. Nevertheless, thousands of general practitioners have had to install their own clinical laboratories and roentgen ray equipment as a natural defense program. All this investment is necessary if the doctor is to give the best type of service that is in him, not acting in an empirical fashion. Only astute physicians can hope to offer to the public this modern type of service at a profit, not to speak of great loss at times. The physician must always be the central figure in medical practice, being glorified by the public for his skill and diligence. The present adverse cycle out of which the country is upturning cannot be permitted to bankrupt these devoted practitioners. It is conceivable that if general business, upon which medicine depends for its service payments, does not greatly improve, that practitioners can not afford to give the best type of public helpfulness. People will insist upon advanced types of medical service though they draw back at the costs, an attitude which is but natural, for it is only the way of the people who need to know more about the resources of knowledge and skill that have to be drawn upon to safeguard life and health.

Diagnosis today still has much to learn, as for example carcinoma of the stomach, which has a latent period of six months, and other incipient internal malignancies. Duodenal ulcer has a history of seven years; there is gastric ulcer and chronic cholecystitis, and the long history of myocarditis. The progress of chronic disease is a chain of events that depends on glandular imbalance. Renal and cardiac disease usually do not occur alone. Chronic infection is indicated somewhere, and the effort is to find the systemic solution, rather than keep on pulling teeth and extracting gall bladders and tonsils. The great problem today is to arrest infection. We feel that sooner or later we shall be able to cure or to control cancer. The constant struggle of the ages is against the germs of disease, the bacteria that are the cause of many low grade infections of the nerves, the seat of vascular disease and of cardio-renal organs and the intestines. Credit is due the labors of Koch and Pasteur and

other heroes of the microscope and of self-experiment, a story which has been well told in books and even on the screen today.

For example, typhoid, cholera, paratyphoid, smallpox have been almost eliminated through preventive inoculation. There are controls for tetanus and gas gangrene. Much was accomplished during the World War by preventing diseases which were scourges of the human race. Malaria was controlled by treating polluted water and by quinine. Diphtheria is practically off the map in this country, and scarlet fever since 1923-24 has been much reduced. Colon infection has been treated with a bacteriophage. Bacterial treatment is of great importance, and one needs a bacteriologist in getting at infections like cholecystitis, and overwhelming the organism with large doses. It is for the physician to make a thorough diagnosis, take the patients into his confidence, educate them in matters of diet and exercise and the elimination of infections and then use the various weapons of modern medicine.

Yes, many a patient spends far more on his automobile parts than to his medical advisor. One cannot buy new parts for the human body, however, and it is the physician's duty to teach him how to run his bodily engine economically. The physician can detect danger signals before the patient is sensible of them. If there is permanent damage, the doctor can determine how far underlying cause may be controlled and then plan a careful existence for the patient. Many patients are in the cardio-renal group, and a thoughtful physician can give invaluable advice. Under the laws of the state, live stock is very well protected from disease and the agriculture department is particularly careful of plants not being infected. There is the same need for attaining a better consideration for human beings, particularly the children whose natural inheritance of joy and freedom is often robbed by disease and infection. It is the physician who is the custodian of that essential of race existence, the children who inherit ours.

During my many years of personal contact with doctors, I have never known an instance where there was a refusal to answer a call for fear of danger to himself. He hastens to relieve misery without asking the terms and con-

ditions, being distinguished by unselfishness of conduct much of it not witnessed in the profession of law, for example. More than one physician has lost his life while ministering to the needs of the insane. We are familiar with the heroism of Dr. Lazear of yellow fever fame. Others have risked lives in investigating Rocky Mountain fever by proving it to be conveyed to man by an infected tick via an animal; also verrugas and bubonic plague, other doctors being martyrs to Malta fever and glanders and spotted fever. There are nearly 200 doctors who have suffered agony as a result of working with roentgen ray and radium treatments. Yes, medicine is truly a progressive science, but do the good people of Louisiana understand that progress is made through suffering and labor. Modern medicine advances through achievements by individual doctors in overcoming the fatal diseases of former days, such as typhoid, diphtheria, yellow fever and others I have named, most of them having been overcome in the last half century. Cancer, however, remains unconquered, and the death rate from heart disease is testimony to years of neglect by the public. The same holds true of tuberculosis, nine out of every ten children having been infected by the tubercle before reaching the age of twelve. Consider for a moment that nearly half of the people who die before the age of thirty have succumbed to some preventable disease.

There are two grand divisions of medicine, one being to prevent and the other to cure diverse diseases, yet they are related closely. One group acts with the weapons of sanitary science, public and private hygiene and immunization to bulwark the public health against invasion of disease, while the other acts at the bedside, at clinic and hospital to restore normal function. Pervading both groups are scientific research and methods that overcome prejudice through education and practical demonstrations in the field of preventive medicine. Every physician is a potential health officer with ability to perceive the common welfare as an object worthy of his constant study and effort.

However, the physician is not obliged to devote himself exclusively to the public good. He has a duty of self-interest and economic neces-

sity. If he fails to provide for his own household, he is not as well qualified to attend to the needs of the public, and the chances are that one so selfsacrificing will return to private citizenship. To this end, the progression should see that the character of medical service which its individual members render is properly and honestly rendered without discrimination, and at a cost within easy reach of every citizen. To meet these conditions is to merit public confidence. There are social strata which have to be ministered to and the poor, no less deserving than the rich, are desirous of the most scientific and skilled treatment, but the demand for medical service has to be met on a mutually fair economic basis.

I wish to indicate that the change which has taken place in medical practice in the last few decades has been from individual, independent practice to that which has a more public outlook. Good medical care is essential to public happiness and life in huge cities, and it seems to me that we should strive toward the care of all the people, regardless of distinctions of class. For the present, due to increasing luxury and comfort and amount of personal attention given to patients, one must invest more money, although one can arrive at the destination of health by a cheaper route. The best medical care may not be available to all the population at all times for the amounts they can afford to pay. Our main desire is the best medical care that may be given to the people. This is frequently offered by members of the medical profession at great sacrifice, but then a duty well fulfilled is compensatory.

The record of progress made since I began practice 30 years ago constitutes a period of unparalleled development in scientific medicine. We feel particular pride in the progress made since 1900, although that is not too distant a date from which to judge conclusively. We are, however, pretty far from the time when the chief stock in trade was made up of chicanery, superstition and personal magnetism. It is a far cry from the time when the man entering the practice of medicine just used his home furnishings, the drugs being simple and prepared by his wife and himself, there being none of the expensive pharmaceuticals in use now,

no elaborate equipment being necessary, and his transportation being usually horse-drawn.

There was a time when quackery was rampant. There was merely a registration law requiring the applicant for a license to file his diploma with the county clerk, this proving a productive source of diploma mills, but under the provisions of the law, state boards have passed on the validity of colleges of medicine and on diplomas. The trend brought about by the increasing cost of medical education has led to the location of an increasing number of men in the large communities and cities rather than in the smaller country towns. Since a man has spent so much money on his education as the present student has to, he does not like the notion of settling in a usually hard-bound and closely calculating community where the returns are frequently quite small.

The requirements are quite rigid, namely, six years of study after graduation from high school. Quite often the M. D. degree is not given until after a year of internship in an approved hospital. The public ought to consider whether these medical practice laws are too rigidly drawn; whether we can reduce our expenses in setting up our offices; whether it is possible to reduce this overhead without sacrificing some of the quality of medical care. It is up to the profession to make these things known to the general public.

Thanks to these advances in knowledge of the healing art, the public has benefited in increased length of life and freedom from epidemics and other diseases. Progressive work has been done by the doctors with the most dreaded diseases of childhood. The doctors have often been accused of self-interest in advising rural communities to be inoculated against the menace of bad water, against typhoid, and children against diphtheria and smallpox. Immunization against disease has made distinct progress, notwithstanding the opposition of cults and ignorance.

Not so many years ago, the sense of smell was used quite extensively to determine the presence of exanthemata. Medicine was practiced largely by the use of the five senses, plus the instruments and the few types of drugs the handbag contained. All that was thought es-



sential in those days was a suitable history and a careful physical examination. The hand was placed on different parts of the body to get the temperature. Today the laboratory period is established, and all of the cells, tissues, secretions and excretions of the human body are subject to microscopic test. Then the roentgen ray came along, to help the physician who depended on his listening to the rales within the chest and who could now observe the pathology that was responsible for the rales. Today, diagnosis has been improved a thousand-fold in accuracy through these means.

Organized medicine has the interest of the public more at heart than all of the so-called charitable organizations, and is far better able to know and to meet the needs of the public than is socialized medicine. In return for this remarkable familiarity with the mental and physical welfare of the community, the public should give the doctor and organized medicine their support. They ought to recognize that the so-called "high cost of medical care" is not actually such but is magnified and exaggerated, due to the fact that the average man or woman does not figure any costs for medical care in his or her annual budget of expenses.

It is always possible to argue from preconceived theories and to provide a panacea for the so-called high cost of medical treatment. Be this as it may, under any state scheme of wholesale treatment, the average doctor is underpaid and often overworked, and the average patient receives insufficient medical care, and such care as he does receive costs him too much. Speaking of health insurances, a "made in Germany" proposal, it is found that the mortality rates and morbidity figures in countries covered by such plans do not favorably compare with ours. Compulsory health insurance is statistically proved to be a questionable blessing. Space limitations compel me to make these bare statements, but the proofs can be furnished in detail. While the cost per workman is low the administration costs are high. The physician whose bread depends on the number of patients he can command gives little time to diagnosis and often overlooks organic lesions until it is too late.

Medicine, notwithstanding opposition, struggling and suffering, right through the ages,

has managed to develop continuously the foundation on which it rests today, but we have to prop up this foundation upon an ethical basis and the spirit of the Hippocratic oath, realizing that only thus can the economic adjustment of medical services survive.

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### STANFORD EMERSON CHAILLÉ; DEAN, TEACHER AND FRIEND\*

JOSEPH A. DANNA, M. D.  
NEW ORLEANS

My first meeting with Dr. Chaillé was on the day of my matriculation as a first year medical student. His erect bearing, straightforward manner in speech and action, and strong clear-cut features, gave me a first impression of strength of character, dignity and power that has endured to this day.

His first lecture impressed me with his serious interest in his subject and his desire to impart it, and I found myself trying to help him by close attention. There was nothing of the flashy orator about him, but he had a way of indelibly driving home a fact, a problem, or an object lesson.

One lecture he devoted to his relationship to us as Dean, and much of it had to do with our behavior when calling on him in his office, with special emphasis on the possible consequences of moving the famous chair on which the visitor sat. During the greater part of another lecture he gave the class a treat in the story telling line, going the full limit so far as spiciness of the stories went.

Though I followed him closely in his lectures and did fairly well in the quizzes, I never during this time got the impression of having become particularly wise. So when as I walked home after the final examination with several of my classmates, one of them began to recite what his answers to some of the questions had been, I felt sure I had failed. When a few days later Dr. Chaillé sent for me I knew the worst had happened. You may imagine my surprise, therefore, when instead of the severe Dean and Professor of Physio-

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\*Read before the Orleans Parish Medical Society, December 9, 1935, at the Chaillé Memorial exercises.

logy, Hygiene and Pathological Anatomy, I was greeted by the friendly smiling Dr. Chaillé who shook hands with me and asked me to sit down in the famous chair. You may imagine my further surprise when he said that he had sent for me because he wanted better to know the student who had made the highest mark in his own branch.

From this time on we became great friends. I dropped in from time to time, some times for advice, often just to say hello. I usually left with a book, or a reprint of one of his articles. He never seemed to mind my dropping in and was always very pleasant and kind.

When I became an interne at Charity Hospital I was selected as the interne to look after the securing of cadavers for his weekly lectures on Pathological Anatomy. Some times these bodies had been set aside four or five days previously and kept in a poor specimen of an ice box, so you could smell things pretty strongly that day through the building long before you reached the upper amphitheatre. During the lecture hour I opened the body and removed the organs, and he picked each up in turn and commented on it. Gloves were unknown then, so we greased ourselves thickly with vaseline from finger tips to elbows and then went ahead. Dr. Chaillé wore his hair rather long, parted over to each side, and had a way, during the heat of his lectures, of running his hand through his hair. I was shocked on one occasion to see him do this with his vaselined hands stained with bloody cadaveric fluid.

That Dr. Chaillé's lectures had made their impress on me was further proved by the fact that my graduation thesis was entitled "Some Sanitary Needs of the City of New Orleans," a rather big subject, especially then, for an insignificant medical student. It earned me honorary mention, however, at the hands of my friend.

Dr. Chaillé was a dignified, lovable gentleman of the old school. He carried himself just as erect when I last saw him shortly before his death as when he wore his military uniform during the Civil War. He seldom actually laughed boisterously, but his stern strong face would occasionally light up with a glitter

in the eye and a peculiar smile that habit and effort could not suppress and that seemed to ooze out in spite of him, and gave him a captivating and irresistible charm.

I never realized during the course of his teachings that I acquired my appreciable store of knowledge of his branch, but I have found myself frequently and repeatedly quoting him all these years, and I can say without reflection on his fellow faculty members that I remember even now more particular things he taught us than those of all the rest of the faculty combined.

To those who did not have the privilege of knowing Dr. Chaillé I should suggest that they may in some sense get some idea of his dignified erect carriage, clear, accurate use of English, facility for impressive and accurate teaching, the admiring devotion of his students, loyalty of and to his friends, his progressive, enlightening contributions to the medical literature covering a vast field of medicine, and showing thorough, exhaustive preparation, his activities in the interest of medical education and organized medicine, and the general esteem in which he was held by the medical profession and laity, if they will take a glance over there at my good friend, his worthy grandson, Dr. S. Chaillé Jamison.

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#### AUTOGENOUS VACCINE THERAPY IN PEDIATRICS\*

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NEW ORLEANS

Vaccine-therapy, especially in the English speaking countries of the world, is becoming more popular and claims many converts to its cause. The last word in the treatment of all clinical entities where bacterial invasion is specifically known, or at times accidentally suspicioned, has many followers whose deductions are enthusiastically and convincingly in the affirmative. There are still others, equally as well trained, who seemingly, after months of experimentation and clinical study, are not of

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the belief that vaccines have proved their worth, either prophylactically or curatively. Numbered in the latter group are those who emphatically state that in instances where satisfying conclusions are obtained—specificity, sensitization and type of vaccine, concentration and number of injections, have played but a small and insignificant role. Might not non-specific proteins have had the same effect?

From the innocent coryza, to the virulent septicemia are entities where vaccine therapy is resorted to in the hopes of their being a panacea when all other plans of treatment have failed.

Disease in all of its phases includes so many different types of bacteria, which necessarily precludes a discussion of all the various vaccines that are being utilized at this time.

This presentation covers autogenous vaccine therapy pertaining to: (1) cold (coryza) with and without sinusitis; (2) asthma; (3) pyelitis; (4) furunculosis;—one hundred and twenty-five cases in children treated with autogenous vaccines. Evaluation as to the relative virtues of the autogenous versus the stock vaccine, or the simple contrasted with the sensitized preparations will not be attempted. Statements of facts alone are given; opinions and deductions are quoted; and my own resumé after ten years of use is presented to you for your criticism and comment. If satisfying conclusions are obtained through this treatment, why discuss at length the many hypotheses, *viz.* whether the patients themselves elaborate their own opsonic power of the antibodies, or by "adding their action (vaccines) to that of the antibodies already formed in the organism." Finally, who is willing to prophesy that our present acceptance of immunity might not ultimately evolve to the belief, above everything else, of the cuti-immunity theory? While I am passively concerned in how immunity is effected, it is of secondary importance. The clinician is actively interested in knowing—are vaccines worth the while?

Table 1. Classification of 125 cases in which autogenous vaccines were used.

1. Common cold	46
a. with sinusitis	14
b. without sinusitis	32
2. Asthma	35
3. Pyelitis	33
4. Furunculosis	11

#### THE COMMON COLD

The world over is the habitat of the common cold, whose incidence is responsible economically for the greatest loss of working hours. Sufficiently important, were it local and self-limited; decidedly more serious are associated complications, resulting in permanent aftermaths or else in death. An insidious pathology lowers the vital resistance to general infections and paves the way for added organic disease. Colds are both contagious and infectious and all of our efforts in the past to limit the same have been of no avail. It is problematical whether or not we shall be able to protect the human race as a whole through immunization. Were the bacterial flora in the nares and throat the same the entire twelve months of each year, then, perhaps, our problem would not be quite so burdensome. But, as there is a change in type and in virulence during each season, to reach a happy millennium would necessitate an autogenous vaccine being made from cultures obtained at least four times yearly. This fact alone explains why the protection anticipated is not immediate and corroborates the statements of others that ultimate beneficial results can only be noted after many months will have elapsed.

Table 2. Improvement with vaccines in common cold with and without sinusitis.

With Sinusitis			
	No.	Fair	Excellent
Cases	8	2	4
Per cent	57.1	14.3	28.6
Without Sinusitis			
	No.	Fair	Excellent
Cases	20	3	9
Per cent	62.5	9.4	28.1
Total Average			
	No.	Fair	Excellent
Cases	28	5	13
Per cent	59.8	11.8	28.4

Table 3. Number of cases given vaccines in common cold with tonsils removed and remaining.

	With Sinusitis	Without Sinusitis
Removed	11 cases	19 cases
Remaining	3 cases	13 cases

Table 4. Cases by quinquenniad.

1925-1930	1930-1935
25 cases	21 cases



Table 5. Age periods of patients given cold vaccine.

Under 2 years	9 cases
2-6 years	24 cases
6-11 years	13 cases

Table 6. Period of year in which cold vaccine was administered.

Early Spring	20 cases 43.5 per cent
Winter	20 cases 43.5 per cent
Autumn (late)	6 cases 13.0 per cent

The carrier rate of pathogenic bacteria of upper respiratory infection noted in autumn is relatively low, resulting in mild types of the common cold. Winter months associate added bacterial host of increased virulence and offer an explanation why outbreaks of infections of the upper respiratory tract assume a more serious aspect at this time. When colds acquire elevation of temperature and constitutional manifestations, a subdivision of this broad clinical entity becomes necessary and the designation of its particular involvement is usually expressed by the name given to that part of the body which is affected more than any other at this time—pharyngitis, laryngitis and bronchitis. If there is a filterable virus of the common cold in the adult, there must of necessity be one in the case of children. By some it is held responsible for the common cold and acts "as an initiating agent which permits these bacteria (pathogenic organisms) to produce more severe infections" Kruse (1914); Foster (1916); Dochez, (1930); Long (1931). Brown (1932) demonstrated the impossibility of immunization with vaccines obtained from the bacteria of upper respiratory tract that would prevent the common cold.

Kolmer (1925) says "It may be stated in general that autogenous vaccines, i. e., those prepared from the patient's own bacteria, should be used whenever possible, especially in the vaccine treatment of disease. To be successful, vaccine therapy demands that the bacteria be as little changed as possible. Before they are killed the bacteria should be endowed with as many of the potencies as possible with which they maintain themselves in the body. As these potencies do not remain unchanged during artificial life, as the loss of capsules, and loss of virulence, it is advisable

to secure the organism causing the infection as quickly as possible and prepare a vaccine without undue delay . . . . Variants may occur among cultures of the same species, . . . . In the use of an autogenous vaccine this risk of using an alien species or a different strain is reduced to a minimum . . . . autogenous vaccines are to be preferred for the treatment of disease providing they are properly prepared. . . . "

Kolmer (1932) concludes, "There must be something of real merit in vaccine prophylaxis and treatment of disease for this therapy to have survived all the abuses committed in its name during the past 25 years."

In discussing the value of vaccination against the "common cold" he states, "For my own part autogenous vaccines or mixed autogenous and stock vaccines have proved of value in the prevention of colds in 50 to 60 per cent of cases without polyps, hypertrophied turbinates, or adenoids, although the duration of immunity following the injection of four or five doses at intervals of three to five days has usually lasted only six to eight months but generally considered well worth while by the victims of frequent recurring attacks of this infection . . . . "

Carter (1932), in the treatment of a cold that is well developed, found that an autogenous vaccine, prepared from the secretions from the nose, mouth and throat, the more satisfactory. His experience in the use of cold vaccines extended over a period of four years. Heiman (1933) believes "the so-called catarrhal vaccines are more vaccines than catarrhal . . . . a vaccine made from the common secondary invaders can aim only to ward off the accessory symptoms and not the cold itself . . . ." Hoyle (1933) treated by autogenous vaccine therapy 67 individuals suffering from very frequent and severe attacks of coryza. The results showed that the vaccine exerted no influence on the incidence of attacks. He found, however, that they tend to diminish the frequency of severe complications such as pneumonia, though supported by only a small number of cases treated in this way. Lengman (1933) states " . . . . Vaccines, either the polyvalent stock vaccines or better, the newer type of selective vaccines,

undoubtedly are a help in preventing head colds in a great many individuals . . . ." Cox (1933) and (1934) received favorable results in a few cases treated with autogenous vaccine.

Brenneman (1934) has had no experience with "cold" shots. Abt (1934) also believes the use of vaccines of doubtful value. Kennedy (1934), in writing on respiratory diseases in children, remarks that ". . . cold vaccine seems to be a satisfactory prophylactic in about 40 per cent of cases . . . ." Briscoe (1934) is of the opinion that vaccine treatment is of value in diminishing after-effects and reducing the period of disability. He suggests that an injection should be given every three or four weeks from the middle of September to April, commencing with a small dose and increasing by 50 per cent until the full dose is reached. Young (1934) believes that vaccines, autogenous and stock, have seemed helpful in lessening the severity of attacks in susceptible persons, and preventing the more serious complications, such as acute nasal sinus infections, especially in elderly mild bronchitics and notably in preventing their more serious attacks. Bethea (1935) states: ". . . An attack of coryza does not produce any lasting immunity and we could not logically expect a vaccine to do much more than an attack of the disease. On the other hand, it might be argued that the disease reduces the vitality of the tissues most concerned and often leaves foci of infection from which subsequent attacks may develop and that these unfavorable effects are not associated with the use of a vaccine, either autogenous or stock."

There is a close interrelationship between colds, sinusitis and bacterial bronchial asthma, thus making it seemingly difficult at times to discuss the one without the others.

#### COMMON COLD WITH SINUSITIS

Unfortunately, the initial head cold or coryza may go unnoticed. Frequent attacks or exacerbations of longer duration follow in quick sequence. Symptoms then assume a disagreeable nature. Some method of relief is sought and the avenue of approach is the sinuses. Sinusitis (maxillary), from my own deductions, is usually involved secondarily. The subsequent colds are associated with pus in the nares, a profuse sero-purulent tenacious dis-

charge and commonly claim a night cough for positive identification. Kerley (1934) shares the same opinion. He records 781 cases where tendency to colds was obviated by a simple method of treatment of the sinuses.

Cox (1933) records the successful treatment of 15 cases of chronic sinusitis, nasal allergy and bronchial asthma, with autogenous vaccines. He later (1934) reports "so improved as to be classed as cured" 15 of 19 patients treated with autogenous vaccines for chronic sinus infections and nasal allergy. He mentions a marked seasonal variation. Ashley (1934), in discussing treatment, states in part, ". . . vaccines, both autogenous and stock, frequently give good results . . ." Parsky (1934) believes that the use of vaccines in acute sinus infection is of secondary importance, that the greatest benefit is obtained only in the sub-acute or chronic case, where autogenous and stock preparations give equally splendid results. In the use of autogenous vaccine, he recommends the procedure of Meyer Solis-Cohen in the preparation of what he terms a pathogen-select vaccine.

#### GENERAL ROUTINE OF TREATMENT

1. Phenolized vaccines \* alone have been employed in the treatment of these 125 cases.
2. The initial dose of the cold vaccine is 1/8 to 1/4 of a c.c., increasing 1/8 to 1/4 c.c. for succeeding doses up to 1 c.c., and maintaining this maximum amount until the treatment will have been concluded.
3. If the case is a serious one, two or three injections will be given the first week; one to

\*All of these vaccines, except two, have been prepared by Drs. W. H. Harris and A. V. Friedrichs, New Orleans, La., as follows:

"The cultures are grown on nutrient agar or on special media where indicated. When growth obtained is sparse, it is spread over the media in order to obtain a luxuriant growth.

"The growth is then washed down with normal saline, with approximately 5 c.c. to form the original suspension. This is then phenolized while in concentrated form and allowed to stand for several hours. A viability test on homologous media is made and if found to indicate death of the micro organisms, the thick suspension is further diluted up to suspensions containing approximately four billion bacteria per c.c.

"From the primary growth the bacteria are studied and identified."

two injections the second week, and one injection weekly thereafter for a period commensurate with the particular case, usually requiring several months. As colds and sinusitis are generally encountered in the colder months of the year, 87 per cent of these cases have received their initial injection in the winter or spring months; 13 per cent in autumn and none during the summer months.

4. A similar routine in the treatment of bronchial asthma is followed, except that the weekly injections are given for at least one month after the acute symptoms have subsided. In this group, as compared with the others included in this paper, the asthmatic child must be treated individually.

5. In pyelitis the same dosage is given and two injections weekly for one month are administered. Thereafter, one injection each week until the urine will have been negative for four successive weeks.

6. In furunculosis two injections weekly are indicated. This therapy is continued until all of the lesions will have cleared.

#### BRONCHIAL ASTHMA

Thirty-five selected cases of bronchial asthma were treated, the same extending over a period of many months. Deductions were most satisfying. Food tests were negative in practically all the cases and where positive were limited in intensity of reaction and number of foods. Tonsils and adenoids had been removed in every case prior to treatment and the other tests included in Chart No. 5 were resorted to where the economic status of the patient warranted it. Continued observations lead me to infer that sinusitis invariably goes hand in hand with bronchial asthma. As would be expected, clear-cut cases due to one etiologic factor alone is the exception and not the rule and every attempt should be made to determine other contributing causes. Where culture growths are sparse and contain none other than the usual flora found in the nares and throat and where there is reason to believe through trans-illumination and radiological findings that one or all of the sinuses are involved, a Douglas puncture is indicated and additional cultures should be resorted to from either the washings or the sinus from the material obtained through suction or by direct culture. Seldom does one

encounter any other than the antrae as being basically the primary cause of bronchial asthma of bacterial origin.

Table 7. Results obtained with vaccines in bronchial asthma. Good or excellent in 65.7 per cent. Food tests in 28 cases.

	No.	Good	Excellent
Cases	12	14	9
Per cent	34.3	40.0	25.7

Table 8. Status of tonsils of patients given asthma vaccine.

Removed	35 cases
Remaining	0 cases

Table 9. Laboratory Asthma Routine. Determine and eliminate:

1. All skin tests.
2. Calcium and phosphorus of blood.
3. Hay fever.
4. Sinus disease (roentgen ray)
5. Blood test (focus infection)
6. Metabolism
7. Bronchiectasis (roentgen ray)
8. Transillumination
9. Nasal smear
10. Urine—indicanuria.

Wilmer and Cobe (1933), in a statistical study covering a period of six years, offer some very interesting information and a pessimistic summary. While they hold no brief for vaccine usage and place no faith in its specificity, still they suggest no substitute to take its place. At best, they conclude that autogenous vaccines are obviously more scientific. Three different groups of cases were followed where autogenous vaccines were employed: (1) "P" Group, where pathogens alone were used; (2) Group "G", including all organisms cultured from the focus whether or not they be normal inhabitants at the site of culture, and (3) Group "C", the so-called selectivity group—the organisms used were based on skin reactions and have been designated "pathogenic selectivity." The bacterin included only such bacteria as gave a definite reaction of 2 plus or more and where the reaction persisted for a period of from 24 to 48 hours, containing both pathogens and normal flora. Indeed, I subscribe to their opinion "that each case of bronchial asthma of bacterial origin should be considered as an individual bacteriologic problem, particularly from the standpoint of treatment, and therapy should be



adjusted to fit the individual case." In variance with their belief that non-specific protein reactions are responsible for the small per cent of positive results, it appears to me that autogenous vaccines have specific responses.

Voorsanger and Firestone, in a series of 66 cases, report 22.7 per cent cured, 40.9 per cent improved and no relief in 36.4 per cent, all having received autogenous vaccine. Their results parallel those found by others, including Rackemann (1923), and tends to discount the efficacy of autogenous vaccines. Auld (1931) suggests that protein shock is the basis for a successful vaccine usage. Cooke (1934) found it difficult to evaluate the effect of vaccine therapy and used only those vaccines which produce a symptomatic asthma. Banks and Beasley (1934) classify the etiology of their cases into intrinsic and extrinsic asthma. "The introduction of the terms extrinsic and intrinsic into the study of bronchial asthma requires further explanation. It seems reasonable to assume that the two groups, seasonal and non-seasonal asthma, possess the same intrinsic cause. The difference, however, lies in the fact that the non-seasonal group does not require some external factor." They quote Weille (1933), whose article entitled "The Surgical Treatment of Chronic Sinusitis in Asthma" led him to deduce that 80 per cent of asthmatic patients exhibit some degree of sinus trouble, though no children under 12 years of age were included in his observations. They offer, as an explanation for the above, that "as age increases, changes must occur in the upper respiratory tract that are conducive to the development of asthma," and like many others believe that asthma of bacterial origin is primarily due to infection of the upper respiratory tract.

Banks and Beasley (1934) combine surgical corrections of any pathological changes produced in either nose or throat and the immunization of the patient against organisms producing the infection when treating cases of bronchial asthma. They too prefer selective autogenous vaccine and feel that it is capable of producing a direct effect upon the cause of asthma. Their method of administration is in contrast to that which is employed by others quoted in this article. Their vaccine is diluted to such a strength that the initial dose pro-

duces no reaction locally or systemically whatsoever. Small increase in dosage given daily has produced quicker desensitization in their hands and evidences conclusions that aim to establish each patient's tolerance for his vaccine. Smaller doses and frequent intervals are the key note of their successes. Of 143 cases, 80 per cent have shown remarkable benefits.

Young (1934) summarizes his observations—"Asthmatic patients are often extremely sensitive to vaccines, it is, therefore, best to proceed on the principle of desensitization rather than that of immunization. Whitby recommends starting with minute doses, a tenth of a million or less, with gradual increases at three day intervals until the maximum dose, which does not cause a reaction, is reached. After this a long series of doses of this strength may be given at longer intervals of a week or more. Reactions should be avoided hence they may induce a severe attack of asthma, or even a condition of 'status asthmaticus' of distressing and even alarming character."

Fleming (1934) concludes "In the early days of vaccine therapy, research was largely directed to the extension of the method to different infections, and innumerable papers appeared showing that almost all bacterial diseases could be prevented or have their course modified by the use of vaccines. In recent years more attention has been paid to the quality of the vaccine and especially to the state of the microbial strain or strains from which the vaccine is made. Intensive researches have been carried out on the different antigens which are present in bacteria and extremely interesting and valuable results have emerged."

#### PYELITIS

Exceptional results have been obtained in 45.5 per cent of the 33 cases of resistant pyelitis by the use of autogenous vaccines where treatments other than cystoscopy have

Table 10. Results of vaccines in pyelitis.

	No.	Fair	Excellent
Cases	11	11	15
Per cent	21.2	33.3	45.5

been used with negative results. Seemingly it is more effective when more than one organism has been recovered. Fox (1933) combines

autogenous vaccine with pelvic lavage in cases of chronic pyelitis.

#### FURUNCULOSIS

Kolmer (1932) believes that we frequently overlook "a golden therapeutic opportunity by omitting vaccine therapy in some acute infections, especially otitis media and furunculosis, which may become chronic and thereby reduce the chances of successful therapeutic immunization." Fautus, (1934) in discussing the therapy of furunculosis with regards to general treatment states: "Impairment of nutrition should be corrected. In all cases of furunculosis the patient should be examined for diabetes, nephritis or anemia and appropriate treatment instituted if any one of these conditions is found. Obesity may require attention. Vitamin deficiency, if present, might be corrected

Table 11. Result with vaccines in furunculosis.

Period	1926-1934
Cases	11
Result	Excellent—100 per cent

by cod liver oil, general ultra-violet irradiation or sun baths and possibly by brewer's yeast.

"Resistance should be improved by: (a) removal of foci of infection, which may keep general resistance low; (b) vaccine therapy with autogenous vaccine, starting several days after disappearance of acute lesions on account of the possibility of the negative phase aggravating the condition. The dose arrived at should be such as to cause a definite but mild local reaction. If the reaction has been excessive, the dose is repeated; otherwise it is gradually increased until the patient tolerates without reaction possibly ten times the dose that at first produced a reaction. The interval between doses should be such as to permit complete disappearance of all phenomena of reaction, possibly three, five or seven days . . ."

My personal follow-up, 11 cases where incisions of the larger furuncles were effected and autogenous vaccines alone given, yielded 100 per cent cures.

#### SUMMARY

1. The use of autogenous vaccine in 125 pediatric cases is reported.

2. This series is limited to the treatment of colds—with and without sinusitis, asthma (bacterial), pyelitis and furunculosis.

3. All children included were followed in private practice.

4. Evaluation of this as compared with other methods of treatment was not attempted.

5. The relative merits of stock vaccines were omitted in their entirety.

#### CONCLUSIONS

1. Cold vaccines gave results in only 28.4 per cent of the cases.

Immediate protection is the exception to the rule.

Small initial with increasing doses, not exceeding 1 cc. at frequent intervals and over a long period of time, is advocated.

The seasonal change of flora of the upper respiratory tract justifies additional observations as to what organisms shall be included and the further consideration of a perennial vaccine.

At this time, autogenous cold vaccines have proved ineffective and should merit but a passive consideration in the treatment of colds.

2. In selected cases, vaccines in bronchial asthma gave 25.7 per cent cures and noticeable improvement in 40 per cent, in all 65.7 per cent compared to 34.3 per cent failures.

The bacterial focus or foci of infection must be sought; the method of culturing should, in every case, follow a definite routine.

Deductions warrant continued use of vaccines in the treatment of bronchial asthma of bacterial origin.

Selective vaccines, based on skin reactions, reported by others, give better results.

3. Vaccine therapy, in cases of resistant pyelitis where other treatments except cystoscopy have been used with negative results, is reported.

Forty-five and one half per cent of these cases have been cured and vaccines appear especially effective when more than one organism has been removed.

The treatment of pyelitis by vaccine should be encouraged and continued.

4. In furunculosis 11 cases have yielded 100 per cent cures.

#### REFERENCES

- Abt, Isaac: *Illinois Med.* 66:366, 1934. (Discussion Brenneman's paper).  
Ashley, Rea: *Sinus disease in children*, Cal. & West. Med., 40:156, 1934.

Auld, A. G.: Non-specific treatment of asthma, *Lancet*, 1:804, 1931.

Banks, H. M. and Beasley, T. J.: Selective autogenous vaccine in the treatment of bronchial asthma, *Ind. State Med. Assn.*, 27:151, 1934.

Betha, O. W.: Vaccines in clinical medicine, *Internat. Med. Digest*, 26:48, 1935.

Brenneman, J.: The common cold in infancy and childhood, *Illinois Med.*, 66:366, 1934.

Briscoe, C.: Prevention of respiratory infections, *Lancet*, 1:645, 1934.

Brown, W. E.: Vaccine in prevention of common cold, *Experiment. Am. Hygiene*, 15:36, 1932.

Carter, W. W.: Common colds: their treatment with vaccines, *Med. Times & Long Island Med.*, 60:153, 1932.

Cooke, R. A.: Asthma in children—its causes and treatment, *J. A. M. A.*, 102:664, 1934.

Cox, W. C.: Autogenous vaccines in the treatment of chronic sinus infections and nasal allergy, *Military Surgeon*, 73:121, 1933.

Cox, W. C.: Further studies, *Military Surgeon*, 75:317, 1934.

Dochez, A. R., et al: Studies in common cold; experimental transmission of common cold to anthropoid apes and human beings by means of filtrable agar, *Exper. Med.*, 52:701, 1930.

Fautus, B.: The therapy of the Cook County Hosp.; furunculosis, *J. A. M. A.*, 103:411, 1934.

Fleming, A.: Recent advances in vaccine therapy, *Practitioner*, 133:537, 1934.

Foster, G. B. Jr.: The etiology of common colds, *J. A. M. A.*, 66:1180, 1916.

Fox, P. G.: Pyelitis, *South. Med. & Surg.*, 95:535, 1933.

Heiman, H.: Respiratory infections in children, *Arch. Ped.*, 50:53, 1933.

Hoyle, L.: Treatment of acute coryza by autogenous vaccine, *Brit. Med. J.*, 1:996, 1933.

Kennedy, H., Jr.: Respiratory diseases in children, *Med. Assn. Ala.*, 3:274, 1934.

Kerley, C. G.: Relation of frequent colds in children to diseases of the accessory sinuses, *Med. Soc. New York*, 30:209, 1933.

Kerley, C. G.: The repeated "cold," *Arch. Pediat.*, 51:254, 1934.

Kneeland, Y.: The protection afforded by vaccination against secondary invaders during colds in infancy, *Exper. Med.*, 60:655, 1934.

Kolmer, J. A.: Infection, Immunity, and Biologic Therapy, 1925, p. 755.

Kolmer, J. A.: Present status of vaccine and non-specific protein therapy, *Pa. Med.*, 36:9, 1932.

Kruse, W.: Die Erreger von Husten und Schmpfen, *Munchen. med. Wchnschr.*, 61:1547, 1914.

Langman, E. L.: Symposium—common cold, *Ind. Med. Assn.*, 26:52, 1933.

Long, P. H., et al: Etiology of acute upper respiratory infection (common cold), *Exper. Med.*, 53:447, 1931.

Persky, A. H.: Sinusitis in children, *Arch. Ped.*, 51:587, 1934.

Rackemann, F. M. and Graham, L. B.: Vaccine treatment of asthma, *Immunol.*, 8:295, 1923.

Voorsanger, M. and Firestone, F.: Vaccine therapy in infectious bronchitis and asthma, *Cal. & West. Med.*, 31:336, 1929.

Weille, F. L.: Studies in asthma; surgical treatment of chronic sinusitis in asthma, *J. A. M. A.*, 100:241, 1933.

Whitby, L. E. H.: Personal communication to R. A. Young, *Pract.*, 133:356, 1934.

Wilmer, H. B., and Cobe, H. M.: Vaccine therapy: the uses and misuses, *Allergy*, 4:414, 1932-33.

Young, R. A.: Advances in treatment of diseases of the respiratory system, *Pract.*, 133:356, 1934.

## DISCUSSION

Dr. Wm. H. Harris (New Orleans): I am very pleased to have had the opportunity of hearing Dr. Bloom's presentation. Of course, in considering the subject of vaccines, and vaccine therapy, we date back to a very old problem. I recall that I wrote a thesis under our late estimable Dean, Dr. Chaille, twenty-eight years ago, entitled opsonins, opsonic index and vaccine therapy. I have always maintained a deep interest in this topic. We will find in the audience here a considerable number of protagonists as well as a great number of antagonists as regards the use of vaccines. There is no gain-saying the fact that use of vaccines is correct in principle and is fundamentally sound. A case of infectious disease gets well because of the fact that the patient forms antistances allied and often identical with those produced by vaccines. At times, however, it is probable that the invaded host contributes to the specific antigen. The question of specific antibody production by bacterial vaccines or other antigens is definitely recognized. I think the most tangible evidence we have of such reactions is clearly shown in hemolysins. If we take three rabbits, inject one rabbit with sheep red blood cells, another rabbit with human red cells, the third with red cells of another animal, the blood sera subsequently obtained from these animals reveals a specific dissolution or breaking down of the particular cells put into each distinct animal. It is clear cut and definitely specific. The same specificity of such antibodies can be produced with bacteria.

From the practical standpoint, we know that vaccines are not the panacea that it was originally hoped they would be. Just as when the bacteriophage came out we thought we had something to clear up every infectious disease, but it has proved of much less value than vaccines. I do believe, however, that sometimes false conclusions are arrived at by the employment of vaccines in certain diseases as well as in a small series of cases insufficiently large to form a proper basis.

I would like to emphasize one particular point in conjunction with the matter of the employment of vaccine and that is, I do not believe it is advisable at any time to do away with clinical treatments and procedures that may aid against the disease process at hand. If we wish to cure a patient, it is primarily sound to use all means we have in our power, and in many instances I do not believe we should use any single form of treatment or procedure. I have especially in mind one phase Dr. Bloom mentioned, the matter of sinusitis with recurrent "colds." It is absolutely fallacious to attempt to use any vaccine without the introduction of some allied clinical therapy. From the



common cold standpoint, we must consider the work of Dochez. It appears from his experiments that a filterable virus plays an important role in the causation. Our vaccines do not contain this virus but on the other hand, the secondary invaders, if they are such, would be of some service. In conclusion, I feel sure that if others who are opposed to vaccines would do as Dr. Bloom has done and give vaccines a fair trial in varied conditions, they would find as he has, that autogenous vaccines occupy an important position in our therapeutic armamentarium.

Dr. Charles Bloom (In conclusion): I had hoped that there would be more or less antagonistic response to this paper. As you will have concluded, I am rather sympathetic to the administration of autogenous vaccines in furunculosis, bacterial asthma and resistant pyelitis but as yet not as enthusiastic about its administration in the so-called common cold. Unfortunately, time does not permit my going into detail relative to the virus which Dr. W. H. Harris has discussed for we know in reality this is essentially responsible for the common cold and that secondary invaders continue this process which ultimately involves the sinuses. I heartily concur with Dr. Kerley, of New York City, who reported 781 cases of chronic colds which were definitely traced to the sinuses.

#### THE USE OF ABDUCTION SPLINTS IN FRACTURES OF THE HUMERUS\*

J. W. FAULK, M. D.  
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In the course of years of practice every physician comes to have certain methods of treatment to which he finds himself giving preference. This fact of human nature gives meetings such as this a two-fold value. In rubbing minds with one another we are shaken out of too exclusive reliance on our favorite ways of doing things, and, again, we are afforded the opportunity of passing on to our colleagues observations on methods which we have been following with success and in which a critical appreciation of their benefits, rather than habit and routine, has led us to put faith, and to receive from them, in turn, similar observations.

I am giving you a plan with which you are no doubt already familiar, the treatment of fractures of the humerus with the abduction

splint. In the last three years I have treated thirty-six cases in this manner. I therefore feel that I can speak with a certain confidence, which will, perhaps, inspire confidence in those of you whose experience with this type of splint has been more limited.

A fractured bone is perhaps the commonest emergency with which the general practitioner has to deal. The coming of the automobile, with the great increase in road accidents, is making fractures of more and more importance to physicians throughout the country. The fracture case is necessarily, in nearly all instances, brought to the hospital as speedily as possible. Roentgen ray examination is essential in the management of a reduction. It is by no means always necessary that the patient be hospitalized for further treatment, and we should realize that when hospitalization can be avoided we nearly always earn the deep gratitude of our patient.

To the physician, the conveniences at hand in the hospital, the trained attendants capable of foreseeing his wants and relieving him of the responsibility for many details, and the fact that in the hospital his language is spoken and understood, make hospital treatment seem the ideal method not only for grave illnesses but also for many cases of prolonged disability where repeated checking of the condition is required. Recent years, however, have brought the physician sharply up against the fact that, if the tide of protest against the high cost of medical care is not to keep on rising, hospitalization must be curtailed as much as possible and omitted altogether whenever this can be done without real disadvantage to the patient. The physician must bear some of the blame for this high cost, because too often he has not carefully weighed the pocketbook of his patient against the more or less theoretical advantages of hospitalization in some cases that could, with perhaps a little more effort and planning on his part, have been cared for at home with equally good final results.

There are numerous appliances on the market for splinting the fractured humerus in abduction; the one which I am using at present is the Scott humerus splint. I have found this splint efficient and time-saving and desirable from the point of view of which I have just

\*Read before the Louisiana State Medical Society, New Orleans, April 29-May 1, 1935.

been speaking, since it does not require hospitalization. I have found the abduction splint satisfactory in almost all types of fracture of the humerus. In my series of thirty-six cases there was only one compound fracture. This was of the lower portion of the humerus with dislocation of the ulna. This case and one other are the only ones that have not been completely satisfactory in end results.

It has been my experience that an anesthetic is not always necessary for reduction of fracture of the humerus, as this can sometimes be accomplished by extension and counter extension with the arm and forearm pieces of the splint. If possible, roentgen ray examination should be made before and after reduction. It is important that the patient should be contacted every few days to determine whether or not complications are developing.

I will cite a few cases to illustrate the results obtained in various types of fracture of the humerus.

#### CASE REPORTS

Case 1. Mrs. S. W., aged 56 years, fell while walking and injured the right shoulder. A roentgenogram showed an impacted fracture of the anatomical neck of the humerus. The fracture was reduced without anesthesia by the aid of the humerus splint. A second roentgen ray examination was made and showed satisfactory reduction. The patient left the hospital shortly after the reduction and reported to the office weekly for six weeks. The splint was then removed. Ultimate function was as good as before fracture.

Case 2. Annie K., aged 12 years, fell while riding horseback and injured the left arm near the elbow. Roentgen ray examination revealed a diacondylar fracture of the humerus. This was reduced under gas anesthesia and an abduction splint was applied. The second roentgenogram showed satisfactory reduction. The patient left the hospital after the reduction with instructions to report to the office on the second day. The splint was removed at the end of about seven weeks and gentle active and passive motion of the elbow was prescribed. Ultimate results were excellent and function was as good as before fracture.

Case 3. Betty Jane D., aged 6 years, fell from a swing in the school playground and injured the left arm near the elbow. Roentgen ray examination showed a diacondylar fracture of the humerus. The fracture was reduced under gas anesthesia and the arm was then placed on an abduction splint. The second roentgenogram showed satisfactory reduction of the fracture and the pa-

tient was sent home with instructions to the parents to bring the patient to the office for examination the following, or second day. These instructions were not followed and the patient was not seen until a week or ten days later, when it was found that pressure necrosis of the skin had developed over the flexor muscles of the forearm. While this complication did not interfere with the healing of the fracture, it caused some worry and suffering that could have been avoided if the patient had been seen on the first or second day after the reduction. The splint was removed after the sixth week, but the ulcerated area on the forearm persisted, for a further two weeks. The end results were good, but the ultimate function was not as good as it would have been if we had seen the patient oftener during the first week of treatment.

Case 4. Mrs. A., aged 53 years, was riding on the rear seat of an automobile when the car was wrecked. She was thrown against the back of the front seat, sustaining injury to the left shoulder. Roentgen ray examination showed a complete fracture of the left humerus at the surgical neck. She was given gas anesthesia and the fracture was reduced. The arm was then put in an abduction splint. On the second roentgenogram the fracture was seen not to be completely reduced. Gradual traction was then made by sliding the arm pieces of the splint until reduction was complete. The splint was removed after eight weeks and the patient was discharged with the arm in satisfactory condition. Ultimate function was good.

Case 5. D. L., aged 45 years, was riding in his automobile when his car was struck by a passing truck. His left arm was injured by being caught between the truck and the automobile. Roentgen ray examination showed fracture of the humerus close to the junction of the lower and middle thirds. The fracture was reduced under gas anesthesia and an abduction splint was applied. A second roentgenogram showed satisfactory reduction. The patient was seen three times during the first week; after that, twice weekly. The splint was removed after the seventh week. Ultimate function was as good as before fracture.

Fracture through the anatomical neck of the humerus, of which my first case is an example, is rare. Cubbins and Scuderi<sup>1</sup> saw only one such in five hundred fractures of the humerus. My case was typical as occurring in an elderly person and in being impacted. Fracture of the surgical neck accounts for about one third of all fractures of the humerus. In a considerable proportion of cases it is complicated by dislocation of the head. This complication may go unrecognized. The possibili-

ty should be borne in mind, since, if reduction of the dislocation is delayed till the bone has healed, the head will be so firmly fixed by adhesions and scar tissue that the force necessary for the reduction may be so great as to produce injury to the blood vessels and nerves about the axilla.

Diacondylar fracture is frequent in children. I have given two examples, both caused by falls. The usual cause is a fall on the outstretched arm, the force being transmitted upward to the humerus. In these fractures prompt and complete reduction is particularly important. Swelling occurs rapidly after the injury. This makes recognition of the bony landmarks by palpation difficult, and enhances the importance of early roentgen ray examination, for reduction should not be delayed through waiting for the swelling to go down. In the first place, the best treatment for the swelling is reduction, and in the second place, should one wait a few days for swelling to subside, adequate reduction may have become impossible by reason of callus, since callus formation is particularly rapid about the elbow and also tends to be excessive at this site. The result would be limited motion in the joint.

Nerve injury is a frequent complication of fracture of the bone in the vicinity of the elbow and is not unusual in fracture of the shaft. It is advisable to examine for evidence of palsy before making the reduction to avoid the possibility of a suggestion in the future that the nerve injury occurred during the manipulation of the fragments.

Non-union is of relatively frequent occurrence following fracture of the shaft of the humerus, and inadequate fixation is one of the causes. Meyerding<sup>2</sup> has pointed out that the commonly used compression splints and sling allow too much movement of the fragments and the weight of the arm, unless constantly supported, tends to produce faulty alignment and to favor edema. The abduction splint prevents edema and permits movement of the elbow and hand. The apparatus applied should not extend from the wrist to or just beyond the site of fracture, as it is often made to do, since this allows the slightest movement of the forearm to be transmitted to the fracture.

Before closing I would like to say a word on the duty of the physician, in these days of road accidents, to instruct the public on the importance of letting an injured man alone, so far as possible, until the doctor can be brought to him. Much added damage is inflicted by the lifting and transporting by ignorant persons of a man with an unsplinted fractured long bone. It seems to be human nature to want to get an injured man on to his feet. "Let him lie" is good advice, unless the nearest physician is at too great a distance.

#### REFERENCES

1. Cubbins, William R., and Scuderi, Carlo S.: *Fractures of the humerus*, J. A. M. A., 100: 1576, 1933.
2. Meyerding, Henry W.: *Fractures of the humerus*, Minn. Med., 14: 963, 1931.

#### DISCUSSION

Dr. H. L. Gardiner (Crowley): I first wish to congratulate Dr. Faulk on his splendid paper. I likewise want to compliment him on the results he obtained in these cases. It has been my privilege to handle some of these cases with Dr. Faulk, and the results have been gratifying.

The abduction splint, because of its simplicity and comfort, has a certain appeal. Like Dr. Faulk, I have used it in all of my fractures of the humerus, whether of the upper end, the shaft, or the lower end, with some modifications.

One of the advantages Dr. Faulk mentioned with this type splint is that it permits the patient to be ambulatory. After a few days he is allowed to go home. It is one that gives complete mobilization, whether in bed or up and walking around.

Another point Dr. Faulk mentioned, was the necessity for taking a roentgenogram. I never attempt a diagnosis without the roentgenogram, taken before the splint is applied and taken after the application of the splint. In fractures of the surgical neck, the arm is put up in abduction with the forearm flexed, being careful thoroughly to pad the elbow, and in addition I use a coaptation splint over the shoulder and arm. I feel that this gives further mobilization and prevents the malposition from occurring.

After the first week I begin massage, and after the second week, gentle passive motion is instituted, gradually increasing it, because the fracture may extend into the capsule and some ankylosis may result if passive motion is not instituted. Besides, a passive motion is easily instituted with the splint in place. In fractures of the shaft it is also used, and again the application of the splint I find of much assistance in holding the fragments in position.

Fractures of the lower end of the humerus are numerous, and there are fractures of the external and internal condyle, or you may find fractures of



no name at all. In this type of fracture I use the same splint, but with a more acute flexion of the forearm. Here early massage and manipulation are again instituted, because of the dangers of ankylosis if this is not done.

I believe the high point of Dr. Faulk's paper was the fact that these cases are ambulatory, that they are permitted to go home, to be out and around. They save hospital expense, and I find they do better at home, where they are happier and up and around, exercising. I have employed practically the same method, and my results have always been satisfactory.

Dr. Guy A. Caldwell (Shreveport): I think Dr. Faulk brings to us a question of utmost importance, and that is the question of the ambulatory treatment of fractures of the humerus. I should like to ask him at the outset: Do you as a rule employ traction on this splint?

Dr. Faulk: There is traction on the splint—there are bolts on the splint to adjust for traction.

Dr. Caldwell: I think traction is of utmost importance. We all realize the difficulty of immobilizing the humerus, because of the motion of the chest wall in breathing, and the factor of putting traction on in order to mobilize and maintain apposition, is an important factor.

I think, too, that perhaps we should consider the location of these fractures. Dr. Faulk spoke of the fractures of the anatomical neck and the surgical neck treated by this splint, and fractures of the shaft, and I believe most of us will agree that traction in abduction, whether it be accomplished in bed or whether it be accomplished on an ambulatory splint, a so-called abduction splint, is a method of choice, provided it is controlled by accurate roentgen ray examination beforehand. But I doubt whether, routinely, the fracture of the lower extremity of the humerus should be treated on an abduction splint. I quite willingly grant that in certain cases where the swelling is great the elevation of the part and, as the author mentioned, the prompt reduction, are both helpful and essential. I can personally report accomplishing those measures in a badly swollen case with the patient in bed. I think the elevation is very good, and the prompt observation in those cases for two or three days until the swelling has definitely gone down is much to be preferred.

We know that non-union in the shaft of the humerus is not uncommon. In fact, it is one of the things that we fear. Where we are using traction, and in this instance traction against muscles that are not particularly strong, nothing to be compared with the muscles of the thigh and leg, it is possible to distract these fragments, and it has been my observation that the distraction of the fragments in the shaft of the humerus is one of the frequent causes of non-union.

I want to bring up another point in regard to distraction. When you have continuous traction, the forward weight should be heavy the first twenty-four or forty-eight hours, and an observation with the roentgen ray at that time may show you good apposition, and it may be continued after the muscles have been stretched. A few days later you will find the muscles well distracted, and not in apposition. Therefore, I would counsel repeated roentgen ray examinations where traction is being used, particularly on the humerus.

One point about the roentgen ray examination. I discovered this point in connection with one of my cases recently. Let us say we have a shaft of a bone coming down here, and another fragment on down here. If the tube of the roentgen ray is here, and a ray is going this way, you may think you have perfect apposition, whereas when the ray comes directly through the site of the fracture you will see it is in apposition. It is not in apposition but is distracted. Those roentgen ray examinations should be carefully and accurately made.

Dr. Isidore Cohn (New Orleans): I enjoyed hearing Dr. Faulk's talk as I remember him as a student many years ago.

In regard to the treatment of fractures of the humerus, the first point I would make is that we should not speak of treating fractures with a particular splint, but we should treat the fracture with the particular type or apparatus or method indicated. It is not the splint that we are to fit the fracture to, the splint should be adapted to the fracture, not the fracture to the splint.

Abduction in the treatment of fractures of the upper end of the humerus we have been using since about 1911 or 1912. In 1913, before the Southern Medical Association, I read the first paper that I published on this subject. The title was "Abduction and External Rotation in the Treatment of Fractures of the Humerus," which Dr. Faulk probably remembers. In that we used plaster casts, and insisted on including the shoulder and the elbow, and not bringing the arm forward, such as Dr. Gardiner spoke of, because I think bringing the arm forward and internally rotating the shaft of the humerus, are the things you do not want to do. I think it is well to keep the arm in the position of shaking hands, so it will literally be in a neutral position, rather than in internal rotation.

That is a picture taken from the article published in 1914, which appeared in the Southern Medical Journal. There you see the immobilization of the elbow. A good many of the text books still show pictures where there is no immobilization of the elbow. Unless you have a continuous traction or fixed traction of the elbow, you cannot maintain your position.

(Dr. Cohn showed a number of slides illustrating the importance of a knowledge of anatomic structures involved in the production of deformity in fractures about the surgical neck of the humerus.

Dr. Cohn also showed a number of slides indicating end results by the adoption of methods employed by him during the past twenty five years in the handling of fractures of the surgical neck of the humerus. The principles insisted upon involve anesthesia, to produce relaxation, reduction of deformity and this includes the breaking up of impaction which exists and immobilization of the arm in abduction and slight external rotation.)

I would take a different side from my good friend Dr. Gardiner, in that I believe passive motion is not indicated, but active motion to the point of not causing pain. Let the patient do what he can, without the opportunity of doing harm with pain. I think pain is harmful in all of these cases, and we are liable to fool ourselves by saying, "Oh, that doesn't hurt." The patient is not going to do anything to hurt himself.

Dr. J. W. Faulk (Crowley): I want to thank Dr. Cohn, Dr. Caldwell and Dr. Gardiner for their discussion. The splint we have been using is also a traction as well as an abduction splint.

## TONSILLECTOMY BY DIATHERMY (ELECTROCOAGULATION)\*

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Beginning with the technic of Celsus and improving through the ages, tonsillectomy has reached a high stage of evolution with electrocoagulation as the most outstanding among the modern methods employed by progressive laryngologists.

Opinions still differ widely regarding the value of this method for the enucleation of tonsils. The controversy has raged intermittently for many years and yet no decision has been reached.

Current medical literature contains much unfavorable comment which stresses the dangers of electrocoagulation. It would seem more logical to criticize unskilled operators, who by faulty technic, are likely to bring any procedure into disrepute. Poor results are recorded principally to the detriment of the method, but redound also to the discredit of the operator.

It is evidence of interest and progress that new methods are attempted, but any procedure which requires so much attention to detail, and such a thorough knowledge of the anatomy and physiology of the tonsils and surrounding structures, necessarily demands some special training on the part of the operator.

Attention to the exacting details of this procedure is so essential, that it would not seem unreasonable to anticipate, and I venture to predict, that the near future will find some few well trained surgeons in each community devoting all of their time to perfecting and advancing this method of enucleating tonsils. It is well to note that from outstanding authorities there is a universal plea for care in technic as well as in the selection of the apparatus for its application.

Indeed, we might begin every discussion of electrocoagulation by denying that it is a panacea, or that it will lend successful results to the tyro in electrosurgery.

I hold very decided and favorable views concerning the value of electrocoagulation for the removal of tonsils, and after an experience of about four years, I am of the firm conviction that not only does this method merit the high consideration now being accorded it, but that the profession in the near future will, of necessity, accept it as a highly commendable adjunct to orthodox surgery.

Any method for the removal of tonsils has to be individualized. Therefore, the use of electrosurgery for this purpose is a matter of election just as with the various surgical methods. As no technic is perfect under all circumstances, the combination of surgery and electrosurgery broadens the field of service for the operator and offers greater hope of approaching the ideal.

Surgery will remain the method of choice for children and in certain types of adults, but in properly selected cases there are conditions under which the tonsils are better suited to electrocoagulation. It should be considered in all cases where there is any objection or contra-indication to surgery or general anesthesia, and when hospitalization

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and the loss of time are important factors to the patient. The increasing number of such cases opens an excellent field for the skilled electro-laryngologist who, by careful technic, may obtain nearly perfect results with a minimum of trauma or discomfort to the patient. It is also useful in removing remaining tonsillar tabs, scar or lymphoid tissue.

Electrocoagulation was devised for the safety and comfort of the patient, therefore, the multistage method should always be practiced. Attempting to remove the tonsil in one, two, three or even four treatments defeats the purpose for which we employ the method and may result in extensive sloughing and alarming hemorrhage.

When conservatively used, electrocoagulation destroys human cells and tissue; it also destroys the blood supply and seals the lymphatics, thus minimizing the possibility of hemorrhage and at the same time preventing absorption of toxic material. No attempt should be made to coagulate other than for therapeutic purposes. It is unsafe to use this procedure beyond the physiological limit.

Care should be exercised in the selection of the diathermy apparatus to be used in the removal of tonsils. A high frequency machine of low voltage, the proper adjustment of controls, and an absolutely accurate meter reading indicating the degree of heat being generated are essential. The speed of oscillation should be about  $1\frac{1}{4}$  million per second, delivering a smooth current which insures the patient against spark or faradism. A high voltage machine may cause sparking and tends to carbonize the wound and prevent prompt resolution.

The type of instruments selected also play an important role. The Dillinger and Gross needles are scientifically shaped and are to be recommended. These needles are of the proper proportions, tapered in various ways, neither too blunt nor too slender, assuring coagulation at the tip of needle. It is very necessary to avoid using a long slender needle which may not coagulate down to point, producing only a penetrating wound,

possibly of the blood vessels, without hemostatic effect.

The author prefers his own right angle, non-conductive tongue depressor which assures a good view of the operative field. It is hardly possible to improve upon the popular pillar retractor designed by Gross.

#### ANESTHESIA

Personal equation enters into the selection of the anesthetic and should guide the surgeon in his choice. I prefer cocaine hydrochloride crystals, but in certain types of individuals it has been found necessary to resort to the use of a 2 per cent solution of nupercaine. Topical applications are made to tonsil and anterior pillar by means of a cotton tipped applicator, first moistened in nupercaine or adrenalin solution, then dipped into cocaine crystals and applied by gentle massage until the anesthesia is complete; this may require two or more applications depending on the type of patient. Only in rare instances have we resorted to the use of cocaine spray to control pharyngeal reflexes; this minimizes the amount used and affords additional security against cocaine intoxication. Electrocoagulation is a dehydrating process, hence the inadvisability of injecting any fluid into the tissues, causing them to become waterlogged, thus tending to diffuse the current. Full cooperation on the part of the patient should be required throughout the preparation and procedure.

#### TECHNIC

After cocainization, the patient is placed upon the table in the recumbent position, with two pillows beneath the head which raises it to correct operating angle. The apparatus which has been previously connected is checked. A piece of block tin 8 by 10 inches is connected by means of an insulated cord to the indifferent outlet of the machine, and placed against the skin in dorsal region of patient. The curved needle which is properly protected by a rubber sleeve, extending from  $\frac{1}{4}$  inch from the tip well up over the junction with the bakelite handle, is connected to the low voltage outlet by an insulated cord which is secured to



the side of the table to avoid interference with the work of the operator. Absorbent cotton packs are placed above and below in the gingivo-buccal margins, extending from the canine to last molar teeth, for the purpose of preventing the flow of saliva over the anterior pillar into the tonsillar fossa. These packs and the use of cotton mops by the assistant maintain a nearly dry field, which is necessary for successful results in the dehydrating process of coagulation. The operator's attention to this detail will lessen the number of treatments and assure a more nearly perfect result.

It is good technic to know where the point of the needle is before the current is applied. The depth to which the needle is inserted into the tonsil is of importance, never more than one-eighth to one-quarter inch, depending upon the amount of tissue to be coagulated. Always direct the needle point toward the center of the tonsil and at the same time allow a safe distance from the periphery, as heat spreads in all directions from the active electrode. Avoid inserting the needle into a crypt as this may cause an abscess.

It is convenient to have a well trained assistant retract the tongue, giving the operator a good view without discomfort to the patient. The surgeon should assume the responsibility of retracing the anterior pillar well away from the field of operation, and also avoiding the posterior pillar and plicatriangularis, as injury to these structures may result in severe reaction and post-operative discomfort.

We are now ready to begin the actual work of coagulation. Introduce the needle about one-eighth inch into the tonsil and apply the current, by stepping on foot switch; in from one to three seconds a white ring appears around the needle. However, the time is not defined by seconds, but rather by the reaction of the tissues to the active electrode; when the white ring appears, release the current and remove the needle. This procedure is repeated until the entire surface of the tonsil has been covered with coagulated areas about one-quarter inch apart. This interspace between coagulated areas is

necessary as over-coagulation produces a fast and extensive sloughing with probable hemorrhage or fibrosis. This can easily be avoided by paying strict attention to detail.

Should slight bleeding occur during the process of treatment, I have found it convenient and satisfactory to use the heel of a curved needle in coagulating the bleeding area.

The tonsil, twenty-four hours after treatment, reveals that the white rings have coalesced forming a greyish mass which later sloughs.

The second and subsequent treatments of the tonsil require greater precaution. After several treatments the tonsil will show considerable reduction in size, and care is necessary when inserting the needle to avoid penetrating the capsule; simply lift up the remaining tonsillar tissue out of its bed and coagulate gently.

Painstaking care must be exercised in removing the lobe in the supra-tonsillar space. It is not advisable to attempt the removal of too large an area in this region at one treatment, as the apex formed by the pillars is very narrow, and since heat from the current spreads in all directions, there is danger of injury with severe reaction to these structures, resulting in scar tissue formation, which may make subsequent treatments difficult or even impossible. I recommend gentle contact of the needle point only, using a weak current to coagulate tissue in this region. This procedure is repeated until extirpation is complete.

Near the completion of electrocoagulation the operator sometimes finds redundant tissue and thickened plicas, so often mistaken for tonsil tissue. Repeated coagulation with the heel of the needle will reduce this redundancy, leaving the pillars apparently free, while only a thin membrane remains of the plica. Haiman uses the so-called cutting knife to remove completely these redundant portions and plica. When the tonsil has been reduced to a small tab or two, no attempt should be made to hook or puncture the tissue; simply rest the needle against the remaining tonsillar tab and ap-

ply a short electrical current. The final examination should reveal a fossa without tonsil, lymphoid or fibrous tissue present and with the pillars and plica-triangularis intact.

#### REPORT OF MISCELLANEOUS CASES

In my early experience one patient with severe bleeding was removed to the Hospital, anesthetized and bleeding controlled, later discharged after an uneventful recovery. I attributed this hemorrhage to the use of a long slender needle producing a penetrating wound without hemostatic effect.

Five other cases complained of slight bleeding which was controlled by the use of ice and *lavoris*. These patients continued treatment until discharged.

My first patient failed to return for a second treatment. Two other cases failed to complete treatment. One received several treatments from a fellow colleague and several from me with unsatisfactory results.

By this method I have removed the tonsils of seven children ranging in age from six to twelve years. In three of this group the adenoids were removed by using a long flexible electrode, adapted to anatomical conformation of part; this procedure was performed through a Yankauer speculum, after cocaineization of naso-pharynx.

In a series of two hundred cases about ninety per cent have shown very satisfactory results. Especially pleasing have been the cases completed during the past year. The experience gained from a large number of treatments, with greater precaution and attention to detail, has contributed to better results in these later cases, and has convinced the author that time and painstaking care in the use of electrocoagulation, will reward the operator with results comparable in every way to those obtained by the use of classical surgery.

#### BIBLIOGRAPHY

1. Dilling, G. A.: Electrocoagulation of tonsils, *Med. J. and Rec.*, 129:450, 1929.  
Tonsillectomy by diathermy, *Am. Jour. Surg.*, 9:294, 1930.
2. Gross, W. A.: Electrocoagulation of tonsils, *Med. J. and Rec.*, 135:214, 1932.
3. Balmer, F. B.: The evaluation of electrosurgery of tonsils, *Arch. Physical Therapy*, 12:10, 1931.

Refinements in surgery of tonsils including electro-surgery, *Ill. Med. J.*, 60:458, 1931.

4. Skillern, Jr., S. R.: The last word in tonsillectomy including diathermy or electrocoagulation, *Virg. Med. Month.*, 55:723, 1929.

5. Doane, L. Leo: Electrocoagulation of tonsils with special reference to a new technique, *Arch. Physical Therapy*, 10:495, 1929.

6. Haiman, J. A.: Diathermy electrocoagulation of tonsils, read before the Academy of Medicine, New York City, December 1930.

#### DISCUSSION

Dr. Charles L. Cox (New Orleans): The essayist has covered this subject very thoroughly as to the indications and technic in electrocoagulation. I just wish to emphasize a few points.

It is a very difficult procedure to remove the tonsils entirely by electrocoagulation. It can be done, however.

Bleeding has occurred in my practice in about the same percentage as in surgical removal. However, in no case has it been very severe.

I think the greatest use we have for electrocoagulation is in removing tonsil tabs. These patients have at one time gone through the hospital, and they do not wish to return. When we find this infected tab we can remove it in two or three sittings and the patient is very pleased.

Dr. A. I. Weil (New Orleans): I want to preface what I have to say by stating that I have no quarrel with the essayist when he says the electrocoagulation of tonsils is admissible in certain selected cases, but he did not emphasize as I feel really should be emphasized, just exactly the limited selection which would guide us in deciding to use this method of procedure.

There are cases, as we all know, in whom surgical procedure, such as tonsillectomy, either with general or local anesthetic, is practically excluded, and in my opinion in those cases alone, are we justified in resorting to this treatment.

Why should we limit it to those cases? In the first place, I agree with the essayist that this procedure is, I will not say without danger, but I will say in proper hands it is no more dangerous than the ordinary tonsillectomy. But on the other hand I believe it is quite as dangerous. The ordinary tonsillectomy is a procedure carried out without injury in the majority of cases, and the technic the essayist described to avoid complications in this treatment shows it is not devoid of danger. I think there is little choice as to danger between the two methods, and it is probably in favor of the surgical tonsillectomy rather than the electric tonsillectomy.

There is no question that the tonsil can be diminished in size by this treatment and possibly removed in toto, but it is possible that the tonsil may not be removed in toto. We know that electrocoagulation of tonsils causes a coagulation of the tissue, and will, in a good many cases, defeat the very purpose for which we are

operating. That is, instead of removing the tonsil in toto, it closes a crypt, so that the injury will be more marked because we have sealed the crypt and consequently sealed in the infection instead of allowing it to drain. I think you will agree that it is not healed in that case.

Also where we have gotten the tonsil reduced to a very small size there is the possibility, even with the most skillful application, of getting our needle into the sub-tonsillar tissue, or into the capsule, and causing some injury.

In removing tabs of tonsils remaining after a tonsillectomy, where there is only a small portion of the tonsil left, and especially in that portion at the base of the tongue, and that is where some tonsil is left as a rule, I believe this method has a very distinct applicability. But I do not think in a meeting of this sort or any sort of meeting we should advocate the use of electrocoagulation as a method of choice, opposed to the surgical treatment of diseased tonsils, except in those cases where the surgical removal of the tonsil, with either a general or local anesthetic, is not advisable.

Dr. R. S. Crichlow (New Orleans): I began the use of electrocoagulation about three years ago, and in that time I have treated about eighty-five patients. I say "treated", because all of the eighty-five treatments have not been satisfactory. In about fifty of the eighty-five I would consider that I have absolutely removed the tonsils, as clearly as though I had operated on them under surgical anesthesia. In the rest, I believe while they may have been helped a great deal, yet the work was not satisfactory.

The essayist referred to the fact that we should use this in selected cases. It has been my observation that those individuals who have large pedunculated tonsils that are mushy, do not respond well to this type of treatment, for the reason that if you attempt to do too much at one sitting, in order to cut down the number of sittings, the result will be that the patient will suffer even more than he would from the surgical procedure. But with the smaller type of tonsil, and that type of buried or fibrous tonsil, this works wonderfully well, and you can clean the fossa just as beautifully with this method as you can with the knife, and with the least inconvenience to the patient.

It has been my experience that in comparing these patients and the anesthetic to be used, I like the cocaine hydrochloride, but I do not like to use it in crystal form. Ten per cent is as strong as I ever use, and by massaging the anterior pillar and then slightly massaging the tonsil and waiting for about ten minutes, we get splendid anesthesia.

I do not go through the procedure that the essayist does, in placing them on the table. They

sit in the chair and carry on a conversation, and the treatment is practically the same as a general throat treatment. By getting their thorough cooperation, I find that I get splendid results.

However, I do not feel that we should use this method in the process of attempting to remove a pedunculated tonsil, unless it is in that condition where general anaesthesia is contra-indicated, such as diabetes, tuberculosis and the like.

Dr. William A. Wagner (New Orleans): I enjoyed the paper very much, because it brings up the old subject about which there has been so much controversy for a few years, coagulation of tonsils. I personally believe it has a place in otolaryngology, but the controversial question is as to how much value it has. It is my frank opinion that it has very little, but some, value in its proper place, and much value for some individual cases. The type of case in which I find it of most value is the type of case in which the patient is suffering from a condition which renders him unable to be subjected to the usual amount of shock in surgery, that amount of shock that is necessary in surgical tonsillectomy, that amount that is produced during a tonsillectomy, whether the anesthesia be local or general. Also that type of patient who is an old individual, who has reached sixty or more and is a poor surgical risk because of a heart condition, and is confronted with diseased tonsils and cannot stand much shock. In my opinion that individual, although requiring tonsillectomy, is not a subject for surgical risk wherein the total amount of shock is created at one time. Such patients may be subjected to electric coagulation with shock that might be treated in small amounts over a period of time, with intervals for recuperation.

That is the only type of patient that I today care to subject to electrocoagulation. It is a patient whom I wish to subject to tonsillectomy with a minimum amount of shock, with intervals of recuperation, limiting my local anesthetic, limiting my surgical procedure.

I believe the paper is timely. I believe surgical coagulation was forced upon us otolaryngologists in a poor manner. It came to us through the local press, the radio, and even the medical press, and certainly through the laity, and it was just pressed upon us and was delivered to us in an abnormal way, in a deceptive way, by the manufacturers of the instruments and consequently we just gulped it in, not realizing its real value.

I should like to leave this last word: It is my opinion that it has its place in otolaryngology, but very limited.

Dr. L. W. Alexander (New Orleans): There is one type of case which has not been mentioned, and I have had several of them, where I have used this method with some degree of comfort to the patient. That is the carcinoma case. I do



not believe the essayist mentioned carcinoma. I have used it on some cases and have made the patient far more comfortable, and I believe the life expectancy has been lengthened.

My technic may not be as good as the essayist's, but I have had one very severe hemorrhage from removing a tonsil tag in the lingual region, in which I had to resort to infusions and almost lost the patient.

Dr. M. P. Boebinger (New Orleans): I want to thank the gentlemen for discussing my paper, because it is by criticism that we learn. I want to thank Dr. Cox for opening the discussion, and I want to say to my good friend Charlie, stick to it, as it has real merit. Dr. Weil, I want to thank you, too, and try to answer some of the questions.

I say that it is advisable to use electrocoagulation any time, in any case, where there is contraindication to surgery. There is no need in my saying that I, too, have done my share of surgery, that I have lost cases by surgery, that I have seen many complications, a great deal of shock and disaster and disappointment, and I see no reason why we should be too harsh on electrocoagulation. It is not new, it is old, at least twenty-five years of age. It has gone beyond the stage of babyhood, and has reached the stage of adult life, and has been used very freely in France and Germany. In a letter I had recently from Dr. Dillinger in this country he indicated that he has done sixty or seventy thousand treatments, probably ranging from three to five thousand cases. He has had very little disappointment in its use. He speaks most glowingly of the method. In heart cases, tuberculosis, nephritis, or any cases where you cannot resort to surgery, it is very applicable. It has real merit.

It has its hazards in the hands of the tyro. It is dangerous, in cases where we put it in the hands of the irregular type. It has received a black eye, probably because men began to think, "Why, I can make real money on this method," and they have brought it into disrepute. We have had lots of knocks on it, but there are quite a few big men in this country who have experimented with it, and they would treat just a few cases and then give it up as not being a very good method.

I say that you can positively remove every piece of tonsil tissue. I wish I had had more time to show some slides. I attempted to bring some moving pictures of some of the work I have done. You can positively remove every piece of tonsil, down to the capsule. You need not worry about having abscesses in a little remaining tissue. In that case you really fail to remove the focus. This tissue must be removed.

Try never to put your punctures too close together, and never try to remove your tonsil in

four or five treatments. It cannot be done.

Dr. Crichlow does not like cocaine crystals. When I came to the subject of anesthesia I said the personal equation should guide the surgeon. Therefore, I will stop there.

You do not like the table. Again I say, that is the personal equation. I like it. If you do not like it, that is all right.

Dr. Wagner, I believe it has a real place in surgery, and, as I said in my paper, it has real merit. It is an adjunct to the classical surgical treatment, but does not replace surgery.

Dr. Alexander brings out the point of having used it in carcinoma with most excellent results. I have used it in tuberculous patients, but I have not used it in any malignant cases. I have had nice results with tuberculous cases, and I will say again that because you had severe bleeding in removing a tab, you are like most of us, in that you try to do too much at one sitting.

## THE ADVANTAGES OF REPAIRING OLD BIRTH CANAL INJURIES AT THE TIME OF DELIVERY\*

THOMAS BENTON SELLERS, M. D.†

AND

JOHN T. SANDERS, M. D.†  
NEW ORLEANS

Childbirth is rarely without some degree of injury to the perineum, anterior vaginal wall and the cervix and, if allowed to remain unrepaired over a period of years, these injuries result in numerous gynecological symptoms, pronounced nervousness, and, eventually, semi-invalidism. During recent years many obstetricians have come to advocate repair of old lacerations immediately after a subsequent delivery in order to put the patient in good physical condition following delivery and avoid the years of neglect usually following childbirth injuries. The procedure is both prophylactic and curative in nature and the patient is dismissed from the hospital in the best possible physical condition, a realization of one of the paramount aims of modern obstetrical care.

### PROPHYLAXIS

Although this paper is primarily concerned with old injuries, it is appropriate that we mention some of the more important prophylaxis.

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lactic measures. Observance of the following precautions during labor and delivery will do much not only to decrease the frequency of injury, but also to minimize the extent and severity:

1. Both bladder and rectum should be empty at the beginning of delivery.

2. In institutional practice, or its equivalent, episiotomy should be performed routinely on all primiparas.

3. Abnormal fetal positions should be corrected whenever possible.

4. Analgesic and anesthetic agents should be intelligently administered during labor and delivery.

5. Meddlesome interference, including the too early use of forceps and the administration of oxytocic agents, such as pituitrin, should be avoided as long as the fetal heart is normal and the condition of the mother satisfactory.

6. All action on the part of the accoucheur should be characterized by careful deliberation rather than frantic haste.

In spite of the application of these prophylactic measures, injuries occur in many cases of abnormal obstetrics requiring instrumentation and in cases which must be handled under poor conditions on account of economic and environmental circumstances. Numbers of women thus have pre-existing injuries at the time of a subsequent confinement and it is this group in which we are interested at present.

#### REASONS FOR IMMEDIATE REPAIR

The outstanding reason for performing repair of old injuries at the time of delivery are as follows:

1. It is a safe procedure as only one anesthetic is necessary.

2. It is sound surgical practice and the end-results are superior to those of the elective operation.

3. It prevents procrastination on account of fear. Few patients will return for operation after confinement until irreparable damage has been done through atrophy and retraction of the soft structures.

4. It eliminates the necessity for many major operative procedures, such as hysterectomy, as early repair of the pelvic floor prevents procidentia and acquired retroversion. (Cooke has called to our attention the fact

that long-standing procidentia and acquired retroversion produce passive congestion resulting in fibrosis, a condition usually necessitating hysterectomy.<sup>4</sup>)

5. It relieves the nursing mother of many local and constitutional symptoms and preserves the nervous system at a time when she is most needed by her family, thus making her better able to nurse and care for her children and to cope with ordinary domestic problems.

6. It results in improved sexual life and greater domestic happiness, preserving many homes which might otherwise be wrecked. Neglected lacerations with their accompanying discharge cause unsatisfactory sexual life, worry and unhappiness and not infrequently become factors in divorce.

7. It is of great economic advantage to the patient as one anesthetic and one period of hospitalization and forced convalescence suffice for both delivery and repair.

8. The patient is discharged from the hospital in the best possible physical condition, a realization of one of the paramount aims of modern obstetrical care.

9. Routine repair of all birth canal injuries at the time of delivery would result in a material decrease in the percentage of malignancy as it is a conceded fact that neglected lacerations constitute a most important predisposing cause of cancer in women.

#### PRENATAL CARE

Repair can be done at the time of delivery in more than ninety per cent of all women needing such operation provided they receive proper prenatal care. The best type of supervision includes the following:

1. Examination of urine and observation of blood pressure at regular intervals.

2. Attention to weight and diet with the addition of calcium and vitamins as necessary.

3. Treatment of local vaginal infections, especially trichomonas vaginitis and monilia infection. This not only puts the patient in condition for repair at the time of delivery, but also lowers maternal morbidity and mortality, as Bland has shown in his large series of cases.<sup>1</sup>

4. Complete physical examination, including blood study, to determine the general condition

of the patient, and energetic treatment of all constitutional abnormalities.

#### CONTRAINDICATIONS

The condition of the patient after delivery and the circumstances under which the case is handled may present contraindications to immediate repair, such as:

1. Home delivery, in the majority of cases.
2. Excessive loss of blood in the third stage of labor.
3. Excessive trauma from operative delivery.
4. Exhaustion or shock.
5. The presence of organic constitutional dysfunction or local infection.

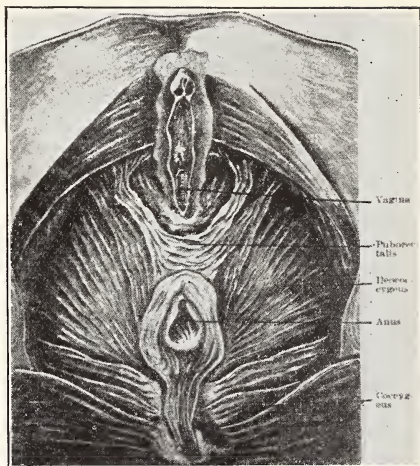
6. Insufficient time for proper preparation.
7. Lack of trained help and adequate equipment.

When the condition of the patient does not permit immediate repair, the advisability of intermediate repair from twenty-four to forty-eight hours after delivery may be considered.

#### SURGICAL REQUIREMENTS

The surgical requirements essential to successful repair of old birth canal injuries at the time of delivery are as follows:

1. Hospitalization or its equivalent.
2. Strict asepsis, with the patient re-prepared and re-draped after delivery.
3. Good anesthesia, preferably general.
4. Knowledge of the extent of injury prior to delivery. (Preferable but not essential.)
5. Thorough knowledge of the anatomical structure of the vaginal outlet.
6. Adequate training in "gynoplastic" surgery.
7. Detailed written instructions to the nursing staff for post-operative care of the perineum.



In a nulliparous woman, you will note that it is impossible to isolate two separate muscles. Wilbur C. Smith believes that the levator ani and the sphincter ani are essentially one muscle and that during repeated deliveries these connecting fibres are torn, causing a separation of the muscle fibers that connect the main body of the levator ani from the fibers that encircle the anus, thus giving the appearance of two separate muscles.

#### TECHNIC

When planning to repair old lacerations at the time of delivery, we routinely perform a perineotomy, going through the mucous membrane of the vagina and exposing the fibers of the sphincter and muscle. Nothing further is done until delivery is completed, adequate time given for separation and expulsion of the placenta, and all bleeding controlled. The patient is then anesthetized, the field of operation re-prepared and the patient re-draped.

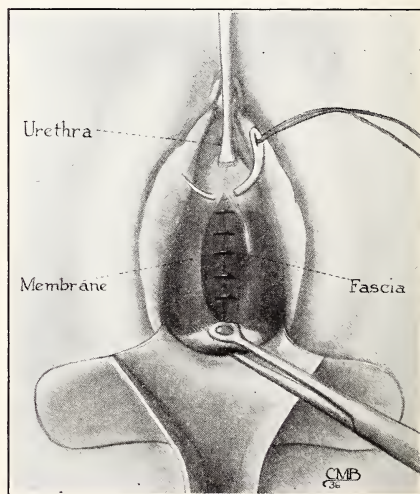
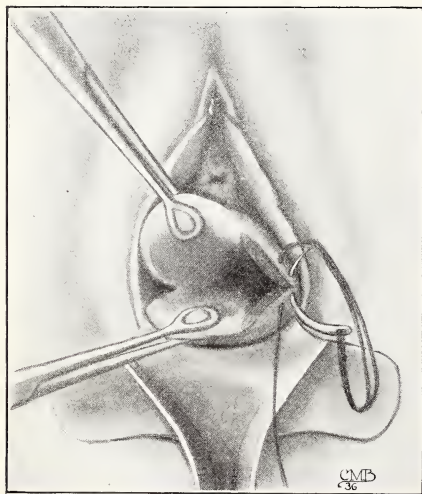
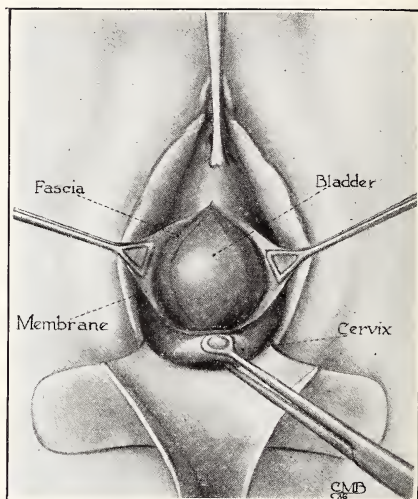
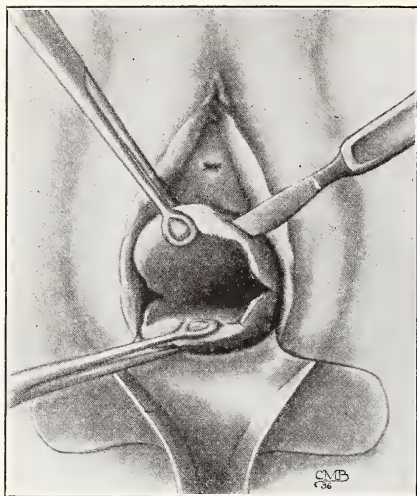
#### CERVIX

The cervix is carefully examined and the extent of injury determined. Before attempting any operative procedure, it is essential to secure good exposure. The patient must be placed on a bed or table, as for an elective gynecological



## CYSTOCELES

In repairing cystoceles the technic is essentially the same as in the elective operation. Ten to 15 c.c. of one-half of one per cent novocaine solution, to which has been added 4 minims of adrenalin, is injected to facilitate blunt dissection and limit the bleeding. A tier of



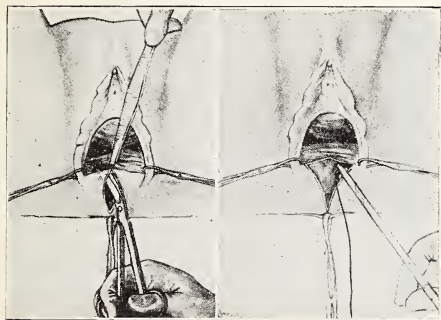
operation, and either a Bubis retractor inserted or capable assistants used to expose the field. In order to decrease the loss of blood, 1 c.c. of obstetrical pituitrin is injected into the cervical tissue before the operation is started. Scar tissue is then dissected away and the freshened edges snugly coaptated with number two chromic catgut.

sutures of number two chromic catgut is used to coaptate the deep fascia, the redundant

mucous membrane is removed and another tier of number two chromic catgut sutures is used to coaptate the mucous membrane of the vagina.

#### PERINEUM

For the repair of perineal injuries we use the technic of Hill's perineorrhaphy as described in one of our former papers.<sup>6</sup> A pair of Mayo scissors is used to raise the vaginal wall from its bed and the lateral flap then lifted up to expose the perineal body, or pubo-rectalis, on each side. At this time the redundant vaginal mucosa, including scar tissue, is removed. A round, curved needle, held in a needle-holder, is used to bring the muscle into view and to place the suture of number two chromic catgut, care being observed not to break the needle. The

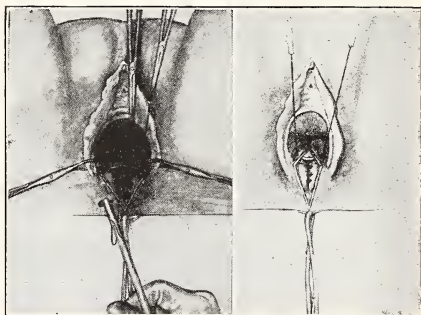


suture is pulled through and the end held by an assistant while the fascial covering of the sphincter on the left side is picked up, then the sphincter at the bottom of the wound and finally the fascial covering on the right side and the pubo-rectalis on the same side, from below upward, to complete the first suture. Three sutures are placed in this manner.

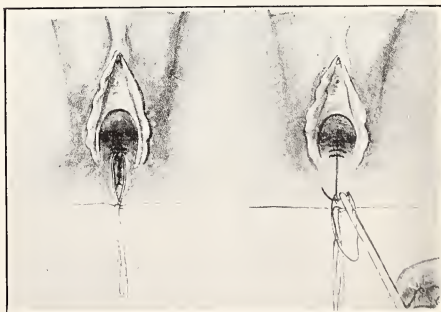
An important precaution which we always observe in placing these deep sutures consists in slipping on a second glove, a size larger than usual, over the one already worn and inserting the index finger in the rectum to be sure that the deep sutures do not penetrate the rectal wall. Naturally, this procedure handicaps the operator unless he has an excellent assistant and may be advantageously substituted by tightly rolled sponge, saturated with K-Y jelly or vaseline and grasped in a

sponge-holder, inserted in the rectum to outline the rectal wall. Care must be observed in the amount of pressure exerted on the sponge-holder which is held in place by means of a Smith hook through the handle and towel until all deep sutures are placed.

The sutures are then pulled up and tied, with particular care not to tie them too tightly, just enough to approximate the tissues snugly. Then the mucous membrane of the vagina is coaptated with interrupted catgut sutures and a figure-of-eight suture placed. This figure-of-



eight suture serves a three-fold purpose: first, it re-enforces the deep sutures by bringing the pubo-rectalis muscle together; second, it restores the relation between the vaginal mucous membrane and the deep structures; and third, it coaptates the overlying mucous membrane of the vagina. Several interrupted sutures of number two chromic catgut are inserted to coaptate the deep fascia and the skin and superficial fascia are closed with subcuticular stitches of 00 chromic catgut.



## POSTOPERATIVE CARE OF THE PERINEUM

Postoperative care is highly important to good surgical results in perineal repair and should include the following:

1. A five per cent mercurochrome wick over the line of suture for twenty-four hours.
2. Daily instillation of two drams of five per cent mercurochrome into the vagina through a small rubber catheter.
3. Mild laxatives, such as petrolagar night and morning, and flushes if necessary.
4. The use of a light to the perineum three or four times a day, forty-five minutes to one hour each time.
5. A minimum of two weeks in bed and avoidance of straining, heavy work and marital relations for eight weeks, until the tissues are thoroughly healed.

It is interesting to note from personal communication that eleven outstanding obstetricians in this section advocate repair of old birth canal injuries at the time of delivery notwithstanding the fact that they differ in opinion as to the amount of work advisable at that time. Their statements represent several thousand cases and not one reports unfavorable results. Bubis, Pride and Bloss advocate routine repair of all birth canal injuries and also amputation of the cervix and hemorrhoidectomy; Johnston and Johnson, and Cowan repair old lacerations of the perineum routinely; and Ross, Garber, Bartholomew, Cooke and Hinkle perform repair only in selected cases. Other gynecologists and obstetricians throughout the country, too numerous to mention, also advocate repair of old birth canal injuries immediately after delivery.

We routinely repair old lacerations of the perineum, uni-lateral and bilateral tears of the cervix and moderate cystoceles, the condition of the patient, of course, always determining the amount of surgery advisable. In cases of long-standing procidentia and unusually large cystocele and rectocele we do not advocate repair at the time of delivery as many of these patients need more than simple colporrhaphy and perineorrhaphy.

Contrary to general impression, the structures are recognizable at the time of delivery and if they are handled with usual surgical care they are not fragile; there is very little if any more bleeding than in the elective operation; and the lochia is normally free from pathogenic organisms and if there are no pockets for stagnation, which later favors infection, it does not interfere with healing.

## CONCLUSION

Results from immediate repair of old lacerations are in direct ratio to the skill and experience of the operator just as in the elective operation. Both time and experience have proved the rationale of the procedure.

## REFERENCES

1. Bland, P. Brooke: *Trichomonas vaginitis in pregnancy*, Surg. Gyn. and Obst., 53:759, 1931.
2. Bloss, James R.: *Advisability of repairing old lacerations of cervix and perineum at time of subsequent delivery*, South. Med. J., 27:5: 439-442, 1934.
3. Bubis, J. L.: *Puerperal gynecology*, Amer. J. Surg., New Series 17:2: 194-205, 1932.  
The physical and economical advantages of gynecologic repairs for old lacerations at or shortly after childbirth, J. Mich. State Med. Soc. 30:418, 1931.
4. Cooke, William R.: *Observations on certain features of the pathology, symptomatology, and treatment of retroversion*, Am. J. Obst. and Gynec., 15:4:493, 1928.
5. Pride, W. T.: *Repair of old lacerations at the time of delivery*, South. Med. J., 23:9:781-785, 1930.
6. Sellers, T. B., and Sanders, J. T.: *The prevention and management of birth canal injuries and the anatomical repair of old lacerations of the perineum*, N. O. Med. and Surg. J., 83:11:757-765, 1931.
7. Smith, Wilbur C.: *The levator ani muscle. Its structure in man and its comparative relationships*, Anat. Rec., 26:175, 1923.
8. Titus, Paul: *Episiotomy and the immediate postpartum repair of both old and new perineal injuries*, Amer. J. Surg., 3:499-505, 1927.

## DISCUSSION

Dr. H. Vernon Sims (New Orleans): I have certainly enjoyed listening to Dr. Sellers' most interesting and instructive discussion of this subject, which is rather new, in a way, though we have discussed it among ourselves for quite a while. He has certainly presented it in a most detailed manner, so that the points he brought out are very clear, and his illustrations follow up the subject which is important to us. We always enjoy a review of the anatomy of any subject under discussion.

There are one or two points that occur to me that were not emphasized, perhaps, that I should like to bring out. One is the extreme importance of the immediate repair of recent injuries at the time of each delivery. It has always been very



interesting to me to see what good results we get with the immediate repair of injuries, no matter how extensive they are. They usually seem to heal by primary union. Therefore, I have taken it upon myself to emphasize that feature of the discussion, in order to avoid the necessity later on of repairing old injuries from previous deliveries.

If we undertake the repair of these old injuries, another very important point to me is the importance of good exposure, at the time. That applies to the repair of recent injuries as well, the extreme importance of good exposure, proper facilities and well trained assistants. These things are very important, and make the repair simple. If you have the proper facilities, the proper exposure and the proper assistance, it is simple rather than difficult. That applies to all kinds of plastic operations.

One little disturbing thought occurred to me. I just mention it in passing, and ask Dr. Sellers if he will mind commenting on it. That, is, there is a possibility that we might increase the incidence of puerperal infection by undertaking the procedure in a number of these cases? It has always been my feeling after having completed a delivery in a case that had been handled without the necessity of a vaginal examination, without the necessity of suturing or any vaginal manipulations, that if any puerperal infection developed I had no worry whatsoever. And I should like to find out if there has been a long series of follow-ups with the idea of checking the possibility of whether there has been an increase in puerperal infection incidental to this work. That would probably be the only thing that would make us hesitate. I could see the value of saving the patient another trip to the hospital by repairing things just as they are, but we should be sure of not running the chance of increasing puerperal infection.

The question of the amount of work to be undertaken comes into play. That, of course, in this procedure, is like in all other procedures, the proper selection of cases, so that each case should be individualized. As Dr. Sellers described his routine, a case must fit certain classifications before she is eligible. He has thoroughly covered the question of shock, hemorrhage, and what kind of a labor the patient had. There is nothing that I could suggest along those lines.

Finally, we have been doing quite a lot of work here in gynecology, on sacral analgesia, and recently have reported some cases in obstetrical work. It is a hobby of mine, and I hope you will pardon me for mentioning it for a moment. Sacral analgesia is satisfactory in all gynecological procedures, provided it is not necessary to open the abdomen. I mean when operating on the genitourinary tract, vagina, perineum, cervix, rectum

and anus. It is satisfactory. I have used it on 500 cases in the last eight or ten years, without having to resort to general anesthesia in any case.

Sacral analgesia would be indicated in this type of work provided it is timed just right, and I should like for some of the men who are interested in gynecology and obstetrics to try sacral on some of the cases, using a one per cent novocaine solution, injected into the sacral canal. Try it out and see if you are not satisfied with it.

Dr. D. C. McBride (Alexandria): Mr. Chairman, I think it is well for Dr. Sellers to bring this subject to our attention at the present time. It is something that is being done. Dr. Pride of Memphis was the first to call my attention to the procedure. I was very skeptical when I first heard his paper on this subject, but I gave it quite some thought, and I think it just goes to show what can be done.

Do not you fellows go home and try this thing out in the country, where you have a granny and a bunch of women hanging around the wall saying, "If there is anything I can do please call on me." About all they can do is make a good cup of coffee. The thing Dr. Sellers emphasized is the procedure must be done in a hospital, with assistants. I have had very few cases, but successful, in each case. However I am still very skeptical about it.

I always try to repair the cervix, if there is any recent injury, provided I am in the hospital. Do not try this thing away from trained assistants, away from the hospital.

Dr. E. L. King (New Orleans): I want to second the word of warning that Dr. McBride has uttered.

I know this work has been done quite extensively. Dr. Bubis has reported well over 1500 cases, I think, Dr. Bloss has reported a good many, and so have Dr. Pride and Dr. Sellers. Still we must bear in mind that it is not possible to sterilize a birth canal and get rid of all the bacteria. Luckily for us, most women are immune to most of the bacteria that are present. The question of the pulling down of the cervix to repair it, to my mind increases somewhat the possibility of infection. Another point is the difficulty of recognizing the old lacerations of the cervix. I think it is wise to repair the new lacerations, if we are in the hospital, but in a home it is hardly wise even to do that.

I should like to ask Dr. Sellers one or two questions. How about this patient in subsequent deliveries? Does she suffer another laceration or more relaxation, and is it necessary to do another repair at that time?

Another point I think should be stressed is that the sutures must be very carefully placed, not tied too tightly, because of the edema that is present, and the repair itself must not be too snug.

We are liable to overdo the repair in these cases unless we are very experienced in the line of work.

As to Dr. Sims' reference to sacral anesthesia, it would appear to me to be rather difficult to time the sacral anesthesia in such a way as to have sufficient analgesia to carry out the repair of the perineum and the cervix. You would have to be very late in labor, in order to get sufficient effects for the repair work. So my attitude would be that it is certainly only a procedure for hospital work, only in the hands of those that are trained, and only to be very carefully undertaken, and that anyone who is going to undertake it should proceed very slowly at first, until he is sure of himself.

Dr. P. B. Salatch (New Orleans): I am sorry I cannot agree with Dr. Sellers. At the time a woman is delivered, the parts are not normal. They are swollen, with muscular relaxation, almost muscular paralysis, and it is quite hard even to find a recent laceration of the cervix, for instance. Looking around and digging around and cutting around an old laceration, I think is poor surgery. I was one of these enthusiasts several years ago, and used to repair cervixes immediately after the operation, but with the ones I did not disturb, nature was so kind, that there was a small percentage of the cervixes badly lacerated. Nature will heal them up and they look pretty good afterwards. It is all right to repair a recent laceration, and that should be carefully done, not in the cervix, but in the perineum.

I believe if you adopt a procedure of doing an episiotomy, a real episiotomy, on all primiparas, you will not have a laceration as a rule on the next delivery. These tissues absorb catgut so quickly that if you do a perineorrhaphy, when you look at your patient when she leaves for home you will find a wound there, and nature is healing it by granulation. I use silkworm. I use catgut in the vagina, high up, and use silkworm on the perineum, and that remains there until I remove it, and I get a good perineum. You do an amputation of a cervix, and if you use catgut without using a tension suture of silkworm to hold those flaps in apposition, you will find the flaps of the vagina wide open, instead of being well placed, and you will be surprised to find a patient coming to you with an obliterated os, simply because the vagina flaps were separated, and healed by granulation.

How many of you look at an amputated cervix before the patient goes home? If you use catgut and still like it, look at the cervix before your patients go home.

Dr. Walter E. Levy (New Orleans): I think the question of the repair of injuries is something that is uppermost in an obstetrician's mind, and I heartily agree with Dr. Sellers in one respect,

that is, the prophylaxis of injuries by means of the proper conduct of labor and by means of the episiotomy. I think this was brought out in this room in the discussion before the Central Association of Gynecologists and Obstetricians.

I am convinced that all the immediate injuries should be repaired, particularly those of the vagina, either anterior or posterior, but I am rather inclined to the views of Dr. King and Dr. Salatch regarding the old injuries. In the first place, the dragging down of this cervix into a frankly infected field, to me, is playing with fire. I believe it was Dr. Bland Sutton, who said God placed the rectum too near the vagina. You are playing with fire in dragging that cervix down. Traumatized tissue will still not stand infection.

I am convinced that fairly routine repair of old injuries is going to be discarded. We will not practice it and do not practice it. The thing is this: It increases the number of days in the hospital, and increases the length of time of anesthesia.

I am convinced, furthermore, according to Dr. Sellers' technic, that you must wait until the delivery of the placenta. You are going to wait fifteen or twenty minutes until that separates, unless you mismanage the third stage of labor, and force it out before it is ready to separate. Furthermore, I do think the immediate repair should be done while the placenta is in situ. It keeps your mind off fiddling with that placenta. I think more cases are ruined by the mismanagement of the third stage of labor than any other way.

In the hands of some men, the suggested procedure may be excellent, but I would hate to teach this to students. I think you would make them meddlesome midwives, as the English call them. I agree that if the individual doctor adopts this (and in Dr. Sellers' hands it would perhaps be more successful than in mine), it should be conducted as a hospital procedure.

There is one thing that I never could bring myself to see, and perhaps Dr. Sellers and others here will agree with me, and that is that relaxations of the vagina and retroversion of the uterus are not to blame for all nervous symptoms in women. I think nagging children and other disturbing things in the home bring it more than these injuries.

Dr. Adolph Jacobs (New Orleans): I do not want to reiterate what has been said before concerning the immediate injuries that occur during delivery. That has been fully discussed and we all agree. On the question of repairing old injuries immediately after delivery, I want to emphasize one point particularly that Dr. Sellers has thrown on the screen on a cut he obtained from Dr. Bubis.

I believe Dr. Bubis of Cleveland was a pioneer in this work. He started to do this about twenty

years ago. He has had many adherents and many antagonists. With reference to that cut where Dr. Sellers showed a cervix being operated in the old gynoplastic method of repairing the angles of a cervix, that is almost obsolete today, and we know that will not repair, or rather cure, so to speak the angles of the cervix. But how about the whole circumference that is affected? That would be more easily done later on by a simple cauterization of conization. Furthermore, how can one detect old tears in the traumatized and edematous cervix noted immediately after delivery?

Dr. Sellers: (Closing): We wrote this paper thoroughly cognizant of the fact that there are those who do not agree as to the rationale of this procedure, but after five years of personal experience with careful follow-up of our cases and in view of the results reported by many leading gynecologists and obstetricians in the United States, we had no hesitancy in presenting the subject to you for consideration.

In answer to Dr. Salatch's statement that the procedure is "meddlesome gynecology", we have already stated that immediate repair of old birth canal injuries is a procedure for the trained gynecologist only. I think he is quite right that in the hands of those untrained in gynecologic plastic surgery this would be meddlesome gynecology.

I am surprised at Dr. Jacobs' statement that the technic for repair of old extensive cervical lacerations, resecting the scar tissue and freshening the edges of the lacerated cervix is obsolete. The procedure has given us excellent results for the past twenty years and I hope those of you who have used it to advantage will not substitute for its linear cauterization for the repair of deep cervical lacerations as suggested by Dr. Jacobs.

Dr. King has inquired concerning the effect of subsequent deliveries. We have delivered a number of women whom we previously repaired, simply performing an episiotomy as we would in a primipara. The results have been most satisfactory.

Dr. Sims called our attention to the use of sacral anesthesia in obstetrical and gynecological operative procedures. I have had limited experience with sacral anesthesia in gynoplastic surgery and none in obstetrics. I agree with him that it has a definite field, especially in gynoplastic surgery and expect to use it in the future in selected cases.

In multiparas with old injuries there should be very little additional trauma to the soft structures; therefore, the danger of infection should be even less in repairing old birth canal injuries than in immediate repair of fresh injuries, the latter procedure causing no controversy. As we have pointed out, Babis, Pride and Bloss report over three thousand cases with no more complications

than would ordinarily arise in a similar group of women not having repair done. We personally have had five years' experience without a single complication and better results with perineal repair than in the elective operation. The danger of over-repairing the vaginal outlet is avoided by recording how much repair is to be done when the patient first presents herself until familiarity with the work produces as accurate judgment as in elective repair.

We emphasize again our statement that the physician with limited experience and training in gynecologic plastic surgery should not attempt immediate repair of old birth canal injuries.

## LEIOMYOMA OF THE PROSTATE:

### REPORT OF CASE\*

JOHN G. PRATT, M. D.†

NEW ORLEANS

This case was tentatively diagnosed as hypertrophy of the prostate, and one cannot believe any other diagnosis possible. It was surprising at the time of operation to enucleate two lobes which did not appear or feel like prostatic tissue, and even more surprising to hear the pathologist report them to be leiomyomas. With interest in this field thus aroused records were examined to determine the frequency of this condition. Finding that there are only twelve cases of leiomyoma of the prostate reported, this case is presented as the thirteenth:

J. D. H., a white male, 73 years of age, was first seen in 1924 for hematuria caused by a papilloma of the bladder, which was destroyed by fulguration. At this time the prostate, by rectal examination, was enlarged and felt like hypertrophy. Cystoscopically there was considerable lateral lobe enlargement, but only one ounce residual urine present. The patient was observed for three years without a recurrence of the papilloma. For ten years, until a short time ago, he had been urinating two or three times at night and every two or three hours during the day, passing a fair stream with only slight burning and pain and some urgency. Of late the stream had become smaller and there had been some difficulty in starting the stream, with a feeling at the end of the act that the bladder had not been emptied. One week previous he had an acute retention of urine and since then had been catheterized three or four

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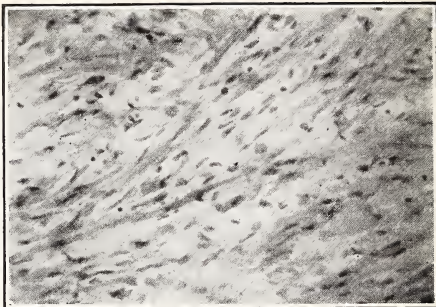
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times daily. Catheterization had become progressively painful and had been accompanied by some bleeding.

The patient was a very large man, six feet in height, weighing 265 pounds, with a very large abdomen. Temperature 99.4°; pulse 86; respiration 24; blood pressure 144/74. Physical examination revealed some heart enlargement outward and downward; systolic murmur at apex and another, quite rough, heard best at the aortic area; rate and rhythm regular. The abdomen was so large that nothing could be palpated. Rectal examination revealed a few hemorrhoids; large lateral lobed prostate which was smooth, symmetrical and elastic to feel. Prostatic secretion contained pus and red blood cells. The blood was negative; coagulation and bleeding times normal. Kidney functional test 45 per cent for two hours. A cystoscopic examination was attempted, but due to the elongation of the urethra caused by the hypertrophy of the gland plus the great amount of pubic fat, it was impossible to enter the bladder.

As the cystoscope was not long enough to enter the bladder and the resectoscope being the same length, transurethral resection was impossible. The urine was cloudy, containing 1 per cent moist albumin, many pus cells, many bacteria. Under spinal analgesia a suprapubic cystotomy was done. A tremendous amount of subcutaneous and prevesicle fat was encountered; the recti muscles were found to be quite thin and poorly developed. The bladder was opened widely and an attempt was made to do a retrograde resection by Ballenger's method, but due to the extreme depth of the bladder the vesicle neck exposure was impossible. Therefore a one stage prostatectomy was performed. Two large lateral lobes measuring 3½ and 5 cms. in diameters were easily enucleated, coming away in a smooth capsule which did not resemble prostatic tissue but appeared more like fibroid. The report of the pathologist read: "Specimens consist of two rounded tumor masses



3½ and 5 cms. in diameters. Specimens are encapsulated, regular in shape and of firm consistency. On section they are pinkish gray in color, slightly lobulated in appearance and of firm consistency. Microscopic sections show whorls of smooth muscle fibres with slight connective tissue stroma encapsulated in a fibrous capsule. No prostate glandular tissue present. Diagnosis: Leiomyoma of the prostate."

Convalescence was most uneventful with the exception of some delay in closure of the suprapubic wound due to the thinness of the recti muscles.

In order to bring the literature on this subject up to date the cases already reported have been abstracted:

*Labee1*, 1876. This case was discovered at necropsy. The patient was 76 years old, in acute retention of urine; bladder enormously distended. Catheterized, developed pneumonia and died. A tumor arising from the middle lobe of the prostate was found, and section showed the tumor to be made up of smooth muscle fibres.

*Damski2*, 1924. Patient was 62 years of age. At operation a large tumor of the prostate was found which gave no clinical manifestations of prostaticism. The specimen was the size of a child's head, weighed 180 grams, was grayish-white in color. Sections made throughout the tumor showed smooth muscle fibres only.

*Bugbee3*, 1925. Patient 49 years old, in complete retention of urine. Urinary history of two weeks' duration. Temperature 99-100°. A mass in the region of the prostate which fluctuated over the left lobe. External urethrotomy was done, breaking through the prostatic capsule. A soft pliable material exuded. About twelve ounces of such material was removed with sponge forceps. Sections showed this material consisted of smooth muscle fibres and some connective tissue. Nuclei showed mytosis only very infrequently. There were also areas of necrosis and of calcification. Diagnosis was leiomyoma of the prostate. Looks



like a case of degeneration of leiomyoma as seen at times in the uterus.

*Rubritius*<sup>4</sup>, 1927. Patient 70 years of age in complete retention of urine. Suprapubic prostatectomy was done and a mass about the size of two thumbs was shelled out easily. This consisted of several nodules, all composed of interlacing smooth muscle fibres.

*Wolman*<sup>5</sup>, 1929. Patient 73 years of age came in with an enlarged, rather hard prostate gland, and also a large intra-abdominal tumor at the level of the umbilicus. Died two months after admission, and a necropsy showed a sarcoma of the upper pole of the left kidney with metastases to the mesentery, retro-peritoneum, liver and spinal column. Bladder showed marked fibrosis of the wall and thickening of the mucous membrane. The vesico-urethral orifice showed a rounded tumor projecting into the bladder, and on the opposite side some enlargement of the prostate beneath the trigone. The rounded tumor was smooth and of a pearly-white color, with a smooth thin capsule. Section showed it to be a leiomyoma composed entirely of smooth muscle fibres without any glandular elements which were found in the other portion of the enlarged gland.

*Hinnman and Sullivan*<sup>6</sup>, 1931. These authors report on two cases. Number 6 was a patient 36 years old who, two years prior to admission, was told that he had a large median lobe prostate. Some months later he began to suffer with sharp pains in the rectum and a desire to defecate. This was more marked at night. There was some aching discomfort in the perineum during the day, but practically no urinary symptoms. Urological examination was practically negative. By rectum a rounded tumor mass was found which at first felt more like a rectal tumor, but the rectal wall was freely movable over it. Recto-urethral palpation showed the mass to be a part of the prostate. Perineal prostatectomy was performed and a mass removed. Section revealed it to be composed of smooth muscle fibres with no epithelial elements. Diagnosis of leiomyoma was made. Case number 7 was a patient 39 years of age. Symptoms began six months prior to admission, and were all rectal. There was constipation, burning and tenderness which was aggravated by defecation. Rectal examination revealed a large smooth tumor mass the size of a baseball. There was no hardness of malignancy. A perineal prostatectomy was performed and two-thirds of the tumor removed. Patient went into shock and died the next day. Microscopic examination of the specimen showed it to be composed of smooth muscle fibres.

*Duitche*<sup>7</sup>, 1932. Patient, 65 years of age, with no urinary symptoms and only a few centimeters residual urine. All of his symptoms were referable to the rectum. For two months had diffi-

culty in passing stools and a marked desire to defecate which was only successful after cathartics and much straining. Rectal examination revealed a large, firm, hardly movable lobular tumor which compressed the rectum just above the internal sphincter. By perineal approach a mass the size of a man's fist was removed. This consisted of multiple globular masses, gray-white in color and sections showed it to be composed of interlacing smooth muscle fibres supported by scanty connective tissue.

*Dial and Halpert*<sup>8</sup>, 1932. Report three cases, two of which were reported by Dr. Skinner and one by Dr. Carpenter. The ninth case was a man 59 years of age with symptoms of frequency, burning and pain on urination of four years' duration. One month before admission the patient became aware of suprapubic fullness, hesitancy of urination, dribbling, incontinency and inability to empty bladder. One thousand c.c. residual urine found. Prostatectomy was performed and a three lobed prostate was removed. In this mass was one nodule which measured 2 cm. in diameter, globular in shape and firmer than the others. It was pearly-white in color and when cut was whorled in appearance. Section showed a fibrous connective tissue capsule covering it, and smooth muscle fibres which were interlacing and supported by a delicate network of connective tissue. The tenth case was a man 65 years old with symptoms of hesitancy, frequency, dribbling, burning and occasional incontinency. History of symptoms was of thirty years' duration but markedly increased in the last two years. Perineal prostatectomy was performed and six pieces of prostate removed. A smooth rounded nodule 12 mm. in diameter was attached to one of the pieces. This was firmer than the rest of the specimen. Section showed it to be composed of smooth muscle fibres with connective tissue stroma. The eleventh case was a man 67 years of age, with symptoms of urinary difficulty of four years' duration, and symptoms more marked during the last year. Residual urine 250 c.c. Suprapubic prostatectomy was done and a tri-lobed prostate removed. The middle lobe was symmetrical, spherical in shape and firmer than the rest of the specimen. It was 2 cm. in diameter and encapsulated, pearly-gray in color. Section showed it to be composed of a fibrous capsule containing whorls of smooth muscle bundles supported by a delicate connective tissue. No glandular tissue present.

*Mitchell and Blaisdell*<sup>9</sup>, 1933. Patient 62 years old with prostatic obstructive symptoms. Rectal and cystoscopic examination revealed a unilateral lobe enlargement of the gland. Suprapubic prostatectomy was performed. A smooth, soft homogeneous tumor the size of a golf ball was removed. Section showed a complete absence of glandular tissue, and only smooth muscle fibres present.

In the twelve cases reported nine presented urinary symptoms and three presented rectal symptoms. In some of the cases which presented the urinary symptoms there was associated with the leiomyomas a true hypertrophy of the prostate gland. In some, even though they were associated with the hypertrophy of the gland, one is led to believe that the leiomyoma was the main obstructing factor. In none of the cases reported were there two distinct leiomyomas, occupying the lateral lobe positions, as was found in the case being reported. No prostate was removed in this case, yet post-operatively the patient emptied his bladder completely and by rectum the prostate was about normal in size, shape and consistency. Therefore, it is evident that the obstructing factor in this case was the leiomyomas springing from the lateral lobes of the prostate.

#### REFERENCES

1. Lebecq: *Progress, med.*, 4:470, 1876.
  2. Damski: *Ztschr. f. Urol., Chir.*, 16:47, 1924.
  3. Bugbee: *J. Urol.*, 16:67, 1926.
  4. Rubritius: *Ztschr. f. Urol. Chir.*, 24:418, 1925.
  5. Wolman: *J. f. Urol.*, 25:93, 1929.
  6. Hinuman and Sullivan: *J. Urol.*, 26:475, Sept. 1931.
  7. Duitche: *Ztschr. f. Urol. Chir.*, 236:475, 1932.
  8. Dial and Halpert: *Arch. f. Path.*, 16:332, 1932.
  9. Mitchell and Blaisdell: *Brit. J. Urol.*, 5:381, 1933.
- Quart Cumulative Index. *Medicus*, 1934; No case reported.

#### DISCUSSION

Dr. Max M. Green (New Orleans): I enjoyed Dr. Pratt's very interesting paper. Its interest lies largely in the fact that this condition runs a course very similar to that of hypertrophy of the prostate, and also in that it is a very rare condition. I checked over the records at Charity Hospital here, and was unable to find a single case of leiomyoma of the prostate. I found any number of the common ordinary fibroid of the uterus, one of the intestine, one of the breast and one of the scrotum.

I was fortunate enough to assist Dr. Pratt in this case and it is the only case I have ever seen. Before operation we thought we were dealing with ordinary hypertrophy of the prostate. When the gland was enucleated we noticed that it peeled out very cleanly, giving the impression of a definitely outlined lobule. Neither of us at the time, of course, thought of a leiomyoma.

Most of these cases come to operation diagnosed as a hypertrophy of the prostate, and so far as I know there is no definite way of telling this condition beforehand.

Dr. G. H. Hauser (New Orleans): Dr. Pratt is to be congratulated on the manner in which he

has presented this case and on the exhaustive manner in which he has covered the literature.

The morning following the operation on this patient Dr. Pratt remarked that he had operated a very interesting case and had had a pleasant surprise during the operation. His was a very fat patient and he had expected to have some difficulty in removing the hypertrophied prostate. However, to his surprise, when he began the manipulation, the tumors (for there were many) were easily seen from the bed, and he said they looked like fibroids. His suspicion was confirmed a few days later when, microscopically, I found them to be typical leiomyomas.

Leiomyomas, of course, are very common in females, but are less frequently met in males. The reason for their being common in females is that they are the most common neoplasm of the uterus. Occasionally, however, leiomyomas are found in other locations besides the prostate in the male, for instance, in the scrotum, in the kidneys, along the intestinal tract, occasionally in the stomach, in fact anywhere where there is found smooth muscle. In the prostate they are certainly not common for in the years in which I have examined many surgical tissues at Charity Hospital, at Mercy Hospital and elsewhere, this is the first leiomyoma of the prostate that I have seen or heard of in New Orleans.

These tumors vary in size considerably. They may be very small—about the size of a split pea, and again they have been reported up to 140 pounds. Some of the older surgeons tell me that in some negro patients afflicted with leiomyomas of the uterus, the tumor was almost as large as the patient.

These tumors grow very slowly, and are well defined and well encapsulated, and consist of masses of unstriated muscle cells. Because of their poor blood supply and slow growth, they are very susceptible to degeneration. Occasionally hemorrhages occur and on this account the tumors sometime appear greenish black in color. Sometimes we find them completely calcified. They are, as a rule, benign but occasionally one will assume a malignant type and metastasize in the lungs and elsewhere.

Dr. Pratt has shown us by his case that leiomyoma of the prostate must be thought of, in spite of its rarity, but we must be careful not to confuse the lobulated, hypertrophy of the prostate, which is so commonly seen, with tumors of this type which are so rare. Sometimes it is only the microscope that can tell the difference.

Dr. M. H. Foster (Alexandria): We have just listened to the presentation of a medical oddity by one of the artists and worthy men in Louisiana urology. In addition to the literary and historic interest of this most rare condition he reported, I feel that we may learn two lessons in:



regard to the topic under discussion. One is that we are becoming more tissue-conscious, and more scientifically critical, about just precisely what we are doing at the operating table, and, second, when we state that we have done a prostatectomy, we know that we have not removed the prostate gland wholly, but we have simply enucleated the offending nodule.

I believe, with my friend Henry Van Deusen of Dallas, that the prostate does not possess an intimate integrated capsule of its own, but that when the nodule begins to hypertrophy within the prostate gland tissue, we may have a very well-defined capsule of this hypertrophied nodule, that we may find very well when going through. I have been struck by this fact because in the case of at least one patient from whom I removed this condition from the prostate a number of years ago, I have subsequently treated him for a gonorrheal condition with pus in the prostate.

Dr. John G. Pratt (closing): My object in presenting this case is to get it in the records, for it is a very rare condition. I do not believe it will help us at all in making preoperative diagnoses of such conditions. The case has all the symptoms of prostatism, and I know that if I were to see another such case tomorrow, I could make no diagnosis other than hypertrophy of the prostate, and be surprised to remove a leiomyoma.

### CAISSONS DISEASE\*

(Compressed Air Disease: Diver's Paralysis.)

LIONEL J. BIENVENU, M. D.,  
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It was not long after compressed air began to be used that it was noticed that exposure to increased air pressure resulted in innumerable symptoms which varied from a slight weakness to complete paralysis. The first account of these symptoms was given by Pol and Wattelle in 1841.

Compressed air is used in the sinking of caissons in the construction of immense bridges over deep rivers. In the past three years, this disease has become quite evident in this State due to the great number of bridges being built which require intact foundations. Often it is necessary to excavate to a depth of from 200 to 300 feet below the bed of a river before a proper stratum can be had for a good founda-

tion. It is then evident that in such depths the variations in barometric pressures become immense and were it not for the compressed air to equalize this pressure, such construction work would be almost impossible.

We live in an atmosphere of 15 pounds pressure to the square inch and it has been shown that a descent of 30 feet will increase the pressure 15 pounds to the square inch. If there were no increase in pressure from the air supply to counterbalance this added pressure, the body would be collapsed; hence the necessity of working under compressed air below the surface of the earth.

#### THE PNEUMATIC CAISSON

The primary purpose of the pneumatic caisson is to enable an excavation to be made in the dry, through water and water bearing soils, either to rock or some suitable stratum capable of sustaining the load designed to be carried. A caisson consists of an air-tight chamber which is open at the bottom in order to permit the soil within the periphery to be excavated. Entrance into this chamber is made through one or more shafts which start at the roof of the working chamber (or deck) and are carried vertically to the top of the caisson. These shafts serve a two-fold purpose, they are used for the sandhogs (men who work under pressure in the working chamber) to climb to the bottom and to hoist out the material that is being excavated. At the top of the shafts are placed "air locks" which consist of a steel chamber fitted with a top and a bottom door. The lock is the device which permits one to enter or leave the working chamber without affecting the pressure being maintained in the working chamber and the shafts. For example, if you wish to enter the working chamber, the bottom door of the lock is closed and the air pressure inside the lock is reduced by opening a valve inside the lock and permitting the compressed air to escape into the open. When the pressure inside the lock is reduced to the atmospheric pressure, it is then possible to open the top door of the lock. One then enters the lock and the top door is closed and air from the shaft is allowed to enter the lock. When the air inside the lock is the same pressure as the pressure in the shaft and working chamber, the bottom door can be opened and one can

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then descend a ladder into the working chamber. The reverse process is used to leave the working chamber.

#### COMPRESSED AIR IN CONNECTION WITH CAISSON

Physics teaches us that water weighs approximately 62.4 lb. per cubic foot, and the pressure per foot as you go below the surface of the water is figured by multiplying the depth in feet by the weight of a cubic foot of water. Therefore, in order to keep the bottom of the working chamber dry, it is absolutely necessary to maintain an air pressure (in excess of the atmospheric pressure) equivalent to the pressure of the water at the cutting edge of the caisson, which is the lowest point of the caisson. It is evident why men have to work under compressed air, and it also becomes evident, from this description of compressed air work, that the physical conditions to which all compressed air workers (sandhogs) are subjected are fundamentally the same, and they differ from work at ordinary atmospheric pressure conditions only because of the increase in barometric pressure.

The ordinary air inhaled consists of a mixture of 79 per cent nitrogen, 20 per cent oxygen and .04 per cent carbon dioxide. Unless the air mixture is kept in these proportions, trouble will necessarily follow. The volume of air which must be furnished each individual is the same, measured at that pressure, so that at no time will the tension of carbon dioxide be greater than at atmospheric pressure.

#### ETIOLOGY AND PATHOLOGY

Cases are chiefly met with in workers in caissons, tunnels, and mines, and in divers. It must be remembered that the higher the pressure and the shorter the period of decompression, the greater the risk. In caissons, the pressure used often reaches 30 to 35 pounds per square inch, rarely 45 to 50 pounds. To Bucquoy and Paul Bert we owe a rational explanation of caissons disease. During compression the blood passing through the lungs becomes saturated with nitrogen, which is carried to the tissues until the whole body becomes saturated with nitrogen. The mass of blood is about 3 per cent of the body, and the capacity of the tissues to dissolve nitrogen

is estimated by Boycott as 35 times that of the blood. In a fat man this is considerably more. With active work it does not take long to effect complete saturation. During decompression the process is just the reverse. We are told that the blood gives up nitrogen to the alveolar air and returns to the tissues for more. The organs in which the circulation is rapid will yield up their nitrogen quickly and those with a sluggish circulation slowly, and at the end of decompression a condition may be set up in which the slow tissues still hold say, 3 per cent of the nitrogen quickly and those with a sluggish circulation slowly, and at the end of decompression a condition may be set up in which the slow tissues still hold say, 3 per cent of the nitrogen, while the blood can dissolve only 1 per cent. Herein is the danger of bubble formation resulting in emboli. The nitrogen in the body fluids begins to dissolve out as soon as the pressure is lowered. This is only harmful if the nitrogen separates in the form of bubbles; these may form in the blood, in the synovial fluid of the joints and in the nervous system. It has been shown that a very rapid reduction in pressure must occur before the formation of bubbles follows. It has been shown by experimenting in goats that all symptoms can be produced and the spinal cord may contain numerous air emboli.

This was the anatomical lesion determined by Leyden who found fissuring and laceration of the cord, which explains the paraplegia. Pulmonary air embolism also occurs and is responsible for certain features.

#### SYMPTOMS

These usually occur from one half to one hour after the men have left the decompression chamber. I do not know of any disease in which the symptoms vary as much as in caissons disease. In looking over the literature on the subject Keays' classification is the most complete. It will be impossible to give the sub-classes. Keays divides the group into 8 classes:

1. Cases showing pain in various parts of the body, this is called "bends" by the sandhogs. This is the most common.
2. Cases showing pain with local manifestations.

3. Cases showing pain with prostration.
4. Cases showing symptoms referable to the central nervous system, i.e. hemiplegia and the spinal cord disturbances of sensation or of movement or a combination of sensory and motor disturbances.
5. Cases showing vertigo, "staggers" in the common parlance of the sandhog.
6. Cases showing difficult breathing and a sense of tightness in the chest. The sandhogs call this symptom the "chokes".
7. Cases showing partial or complete unconsciousness, with collapse.
8. Fatal cases, with symptoms belonging to groups 3 and 6, symptoms belonging to groups 4 and 5 or even to symptoms belonging to groups 7 and 9.

We are able to judge then the wide range of symptoms which may be included under the general title of caissons disease. The most common symptoms are headache, giddiness and a faint feeling, symptoms which may pass off and leave no further trouble. Other instances may consist of severe pains in the extremities, usually the legs and the abdomen, sometimes associated with nausea and vomiting. The pains may be of great intensity. The paralysis, usually of the legs, comes on rapidly and varies in degree from a slight paralysis to a complete loss of both motion and sensation. In the extremes, the attacks resemble apoplexy; the patient rapidly becomes comatose and death occurs in a few hours. The paraplegia may be permanent, but in slight cases it gradually disappears and recovery is complete. Late resulting features are spinal cord changes, chronic arthritis and deafness. In other words, wherever an air embolism may lodge we shall find a symptom of the affected part which may mean any part of the human body. A typical case may be given as follows:

A patient very well developed, aged 30 years, had worked for several months under pressure. After working from 8 to 11 a. m. and from 2 to 5 p. m. under 35 pounds, he went home. About one hour later he began to have a tightness of the chest with an almost constant cough. I saw this man about two hours later and I found him with severe pain, especially in the abdomen and legs. He was pale, sweating was profuse. The pulse was rapid and not of a good volume. There was a peculiar mottling of the skin which was passive and when an attempt was made to raise this man

on his feet he wobbled and fell. He was immediately put on a stretcher and brought to the compression tank a few blocks from his home, where he was recompressed. For some time there was no improvement and about one hour after recompression began his color became better and the pulse much improved with a cessation of pain in the abdomen. After sitting up he complained that he felt very weak but the mottling completely disappeared after three hours in the medical lock. He was returned home and watched closely for the next 24 hours. He returned to work in four days apparently well.

#### TREATMENT

The most effective means is first, recompression. All other methods are purely theoretical in their virtues. Even morphine at times does not seem to relieve pain as much as in ordinary conditions. Of course the application of heat, massage, strychnine, oxygen and warm drinks are always given. In three cases I have seen with motor disturbances and involuntary actions of the bladder and rectum, spinal puncture was done every three days and improvement was steadily manifest. This of course followed recompression and the patients were in the hospital. It was strange to note that the pressure of the spinal fluid in each case was increased but no blood was noted in the fluid. These patients remained in the hospital an average of 36 days. Following spinal taps, heat, in the form of infra-red applications, was applied three times daily followed with a 20 minute round of massage. Emory of New York recommends the injection of ergot during the time spinal punctures are being given.

#### PROPHYLAXIS

Early in the twentieth century, as caisson workers became more and more general and compensation insurance gradually became law in most of the States, a great deal of study and research was made as to the cause and effect of the disease and the relationship between the hours worked under various pressures and time taken to come from various pressures into the atmospheric pressure. Tables of these relationships were made and in general the following table is an average of what the various States and authorities have established as being a compromise between the employers and the authorities having jurisdiction over such matters.



Pressure above atmospheric.	Hours worked	Time required to lock out
5 to 18 lb.	8 hours (30 min. for lunch)	5—10 min.
18 to 25 lb.	6 hrs. 3 hrs. on 3 hrs. off	10—15 min.
25 to 32 lb.	4 hrs. 2 hrs. on 2 hrs. off	15—20 min.
32 to 38 lb.	3 hrs. 1½ hrs. on 6 hrs. off	20—25 min.
38 to 43 lb.	2 hrs. 1 hr. on 6 off	25—30 min.
43 to 48 lb.	1½ hrs. ¾ hrs. on 6 hrs. off	35—40 min.
48 to 50 lb.	1 hr. ½ hr. on 6 hrs. off	40 min.

In locking out it has been found that during the first 5 minutes the pressure can be reduced about 50 per cent and that the balance of the time can be used to reduce the other 50 per cent. Men will reduce the locking-out time if not carefully watched, as they usually are uncomfortably crowded and are chilled from being wet and never seem to appreciate the danger of locking out too fast. Immediately, when the men come out of the lock, they should be furnished with strong hot coffee and then made to take a hot bath and put on warm clothing. The clothes they have been working in should be hung up and dried so that the clothes will be dry when they have to go into the caisson again. They should be required to remain near the medical lock for at least one hour after coming out as most cases of "bends" develop within that time, and if they do develop any symptom, they can be immediately put back under pressure and wrapped in warm blankets and massaged while the pressure is very gradually reduced from the pressure under which they have been working.

General requirements for men working under air pressure are that they should have a strong constitution and a good heart and lungs. They should get 8 hours of sleep in 24 hours. They should not use alcoholic stimulants. They should rest immediately after coming out of pressure. Re-examination of all absent employees should be routine and re-examination should be made after three months.

The pseudotype of caissons disease is most interesting. Due to the Workmans Compensation Laws and the high wages which the sandhogs receive in their hazardous work, most States compensate an injured employee from 60 to 65 per cent of his actual wages. The sandhog type of laborer is worldly wise. Their

work brings them over every State in the Union and often in many foreign countries. Hence, they become very well educated and I dare say that no man has been in this line of work longer than a few years before he develops a thorough knowledge of the various compensation acts in each and every State within which he works. Seldom will one find a real sandhog who cannot give a thorough description of the "bends".

#### CASE REPORTS

I have two cases in mind that necessitated long hospitalization before a positive diagnosis could be made. It is a very difficult matter to rule out caissons disease when a man is brought to the hospital in an apparent typical seizure.

Case 1. A negro male, aged 42 years, well developed, was brought into the hospital with a complete paralysis of both legs. He could not even move his toes. It seemed that three days previous, one hour and a half after leaving the air-lock, he developed severe abdominal cramps and soon became so weak in both legs that he could not stand up alone. He was immediately recompressed in the medical lock for three hours. Following this he noted a cessation in the abdominal cramps and could walk a little with assistance. Several hours later, he was again unable to walk unassisted. He was taken back to the medical lock and recompressed for a period of four and a half hours. After this recompression, he was able to return home but the next morning he was not able to get out of bed nor to move his legs at all. Though there was no suffering he could not move his lower limbs and he noticed involuntary movements of the rectum and bladder. He was brought to the hospital where the following was noted. A complete inability to move his lower limbs, the knee reflexes were absent; the pupillary reflexes were sluggish; the blood pressure was 165 systolic and 110 diastolic. The sensory disturbances of the lower limbs were marked. No other pathology was present. A spinal puncture was done, the fluid was under a considerable

pressure but clear. The following day, the blood pressure was 140 systolic and 105 diastolic. Ergot was then begun, 1 c.c. every 4 hours by hypodermic. On the third day he was able to move his toes. On the fourth day another spinal drainage was carried out. On the fifth day the rectum and the bladder functions were normal, with a blood pressure of 140 systolic and 105 diastolic. The sixth day he was able to flex both legs. Gradual improvement in the paralysis was noted and on the fifteenth day another spinal puncture was done and a specimen of the fluid sent to the laboratory from which a report of a plus 4 positive for lues was received. He was able to get around on crutches and returned home. This man was an old head at the game. Though he denied all venereal history I feel that he was aware of the actual trouble and when he found himself unable to move his legs he may have decided to have severe abdominal cramps because of his familiarity with the "bends".

Case 2. Another case worthy of mention was that of a white male, aged 28 years. He left the air lock at 5 p. m., took a hot bath and put on fresh, dry clothes, ate supper and one hour later experienced severe abdominal pain. He was immediately recompressed and after leaving the medical lock was able to return home. He remained at home for two hours when he again began to have severe abdominal cramps. Morphine grs.  $\frac{1}{2}$  was administered with no relief, so he was returned to the medical lock and again recompressed over a period of three hours. Following this, he admitted that he was relieved of the abdominal pains but felt very weak. He returned home but at 5 a. m. the next morning he complained of excruciating pain in the abdomen and inability to walk or to urinate. He was catheterized and given  $\frac{1}{2}$  gr. morphine. Slight relief was noted from the morphine. In the course of an hour he vomited a small amount of blood. He was brought to the hospital about 10 a. m. The physical examination was negative except for a pulse rate of 100, respiration of 26 per min-

ute. The inability to move his legs was marked with some sensory disturbances of the lower limbs. Ergot was given every 4 hours by needle, also hot packs and massage. This man appeared to be a tough one and exceedingly wise, so we immediately became suspicious of him. He was told that night that the next morning spinal drainage would be made if he did not appear better. At 8 p. m. on the day of entering the hospital he complained so much with inability to pass his urine that he was again catheterized. Lo and behold, the next morning he did feel better and he could move his legs a little and did not complain of any pain. Three days later he again complained of abdominal pain for which morphine was given and relief was noted. That afternoon he vomited a small amount of blood. Careful examination of the nose, mouth, throat did not reveal the cause of the bleeding. The patient had a chronic bronchitis but the blood was not frothy. Roentgenogram of the chest was negative and the sputum also was negative for acid-fast organisms. After the bleeding this man would appear better and do nicely, but every three days, periodically, he produced the hemorrhages. All other symptoms cleared except for a weakness of the lower limbs. He remained in the hospital four weeks during which time he was up and down in a rolling chair, except on the days of hemorrhages. It was decided by the Insurance Company to offer him a compromise which he accepted. It was discovered that he was the owner of the gambling interest at the job. He had two men working for him and every day brought him the winnings at the hospital. After receiving the compromise from the Insurance Company we asked him to tell us where the blood came from assuring him that his answer would have no bearing on his case. He gave us the "laugh" and refused to say. Three months later he was in the penitentiary in Washington State. His record showed that he was dishonorably discharged from the army for murder and he had been in jail on two previous occasions in different States.

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## NEW OFFICERS OF THE LOUISIANA STATE MEDICAL SOCIETY

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Dr. Hiram W. Kostmayer took office as president of the State Medical Society at the recent meeting in Lake Charles. Dr. Kostmayer, Dean of the Graduate School of Medicine and Professor of Gynecology at Tulane, will make undoubtedly one of the outstanding presidents the Society has ever had. To succeed Dr. Kostmayer, Dr. C. M. Horton of Franklin was made president-elect. Dr. Horton, as Chairman of the House of Delegates, is well known to the men who have attended

the State Society meetings in years passed. A man of charming personality with a splendid reputation in his chosen field he will undoubtedly make a president who will maintain the high standards set by his predecessors. As first vice-president Dr. R. C. Young of Covington was chosen by the House of Delegates. Dr. Young is one of the younger men in the profession in Louisiana and has been always active in the affairs of the St. Tammany Parish Medical Society and the State Association. Dr. A. W. Martin, of Bogalusa, will become second vice-president, an honor deservedly bestowed upon one of the loyal members of organized medicine in the state. The same may be said about Dr. Guy Shaw of Loreauville who was made third vice-president, a real honor to an honorable gentleman.

As secretary-treasurer, our efficient present office holder, Dr. P. T. Talbot, again was deemed a most efficient executive, valued for the work he has done in the past years in the active management of the affairs of the office. Dr. P. King Rand of Alexandria became Chairman of the House of Delegates. A man of force and dignity, Dr. Rand will make an excellent presiding officer and if by chance something prevents him from attending the regular meeting, to take his place there will be Dr. Val H. Fuchs of New Orleans who was made Vice-Chairman of the House of Delegates. In his hands also the Delegates can feel assured that they will receive fair and just treatment. The Councilors for the next two years were re-elected in the First, Second, Fourth and Fifth Districts. Dr. H. E. Bernadas, Dr. D. N. Silverman, Dr. M. D. Hargrove and Dr. J. B. Vaughan, respectively, have served for the most part for many years efficiently and self-sacrificingly; theirs is a well merited re-election. From the Sixth District Dr. R. G. McMahon from Baton Rouge was elected to fill the vacancy left by the resignation of Dr. C. A. Lorio. He should make an excellent choice.

To all these new officers the journal offers its congratulations and best wishes.



## AMERICAN MEDICAL ASSOCIATION

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The recent meeting of the American Medical Association at Kansas City was truly a magnificent convocation of medical men. At this meeting were read papers prepared by the leaders in the profession and the men who are doing the outstanding work in this country. There was a scientific exhibit which was so comprehensive and so complete that literally a man could spend several days studying the various exhibits, in fact it would be almost necessary to spend that length of time in order to acquaint oneself fully with these things which were being shown. The commercial exhibit was splendid and was really quite instructive. In addition to all these features there was the opportunity not stressed in the program of seeing medical friends from all over the country. The social side of the gathering was not neglected.

When one considers what the American Medical Association has to offer to the physicians in this country it is a wonder that every eligible practitioner does not belong to the organization. He may not be able to attend the meetings for various reasons from year to year but at least the opportunity of going to this gathering when the opportunity presents itself should be accepted by every qualified practitioner.

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## PROTAMINE INSULIN

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It might seem advisable to call the attention of the profession to a new insulin preparation which, while not yet on the market, will certainly appear in a comparatively short time. The drug, a protamine preparation of insulin, has been in use now in most of the large clinics throughout the country for some months and has stood the test of practice. This preparation of insulin has the very decided advantage of being prolonged in its action. The insulin of today, strange to say, in some respects is inferior to the older preparation. Modern insulin has been so refined and so concentrated that its effect at times literally is explosive.

The immediate effect is prompt and vigorous but it passes off rapidly and there is no longer left any of the insulin which can assist in metabolizing carbohydrate. This is of decided disadvantage, more particularly in youth and in those individuals whose blood sugar is delayed in rising after ingestion of carbohydrate. The new insulin has a mild but continuous effect. The diabetic patient in the future may, in most instances, get along satisfactorily with the old insulin but for certain individuals it is more often likely that the insulin they take will have to be tailor-made, a combination of the old insulin and the new insulin protamine, properly adjusted to their individual requirements.

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## DEATHS IN THE PROFESSION

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It is our sad duty again to be compelled to record the death of two leaders of the medical profession in New Orleans, Dr. Foster Matthew Johns and Dr. Jacob Warren Newman.

Dr. Johns passed away suddenly in the full bloom of his medical career. An always active and busy practitioner of his specialty, Dr. Johns found time to give hours to various duties that had to do with the Orleans Parish Medical Society and the Louisiana State Medical Society. His industry was not only in the routine work that he was required to do but he gave unstintingly and unselfishly to others. Much of his time was devoted to activities that were in no sense remunerative. Big hearted and lovable, he enjoyed the friendship and the admiration of his New Orleans associates probably as much as any other man in the city. Dr. Johns' demise is a real tragedy and a loss not only to his devoted family but also to his innumerable friends.

Dr. Jacob Newman in late years, on account of ill health, had more or less withdrawn from medical activities, nevertheless he was an outstanding man in his public spirited contributions to the health and welfare of a large number of the indigent peoples of the city of New Orleans, more particularly the children. Through his generosity and his interest in the problems of early childhood he accomplished much in the city.

# HOSPITAL STAFF TRANSACTIONS AND CLINICAL MEETINGS

## SHREVEPORT MEDICAL SOCIETY

The regular meeting of the Shreveport Medical Society was called to order by the President on May 5, 1936, with 38 members and 3 guests present. The minutes of the previous meeting were read and adopted. Before proceeding with the regular business, Major E. R. Wiles, in charge of arrangements for the coming Confederate Veterans Reunion, spoke briefly, requesting the aid of the doctors in running first aid stations in various parts of the town. Dr. J. A. Hendrick introduced a motion to the effect that the Shreveport Medical Society cooperate fully with the Chairman of the Medical Committee, and that he select his own assistants from the membership of the Society. The motion was duly seconded and carried.

Treasurer's Report: The Treasurer reported 120 members with 1936 dues paid and only 11 unpaid. He reported a balance on hand of \$1,238.08.

Committee Reports: Committees on the applications for membership of Drs. Pipes and Pardue reported favorably.

Dr. Lucas, Chairman of the Entertainment Committee, requested any suggestions for the entertainment to be given in August.

Dr. J. A. Hendrick, Delegate from the Shreveport Medical Society to the Society for Crippled Children, spoke of the work this Committee is doing, and Dr. Webb requested the doctors' cooperation in compiling a list of all under 18 years of age who have had poliomyelitis.

Dr. Young, Chairman of the Publicity and Public Relations Committee, stated that the annual diphtheria immunization campaign had been set for May 11 to 23.

This being the annual "Business Meeting", the subject of the Mechanics and Ethics of Consultation was presented by Dr. J. E. Knighton, Sr. He outlined the various phases of ethics under three headings: First, the duty of the physician to the patient; secondly, the duties of the physician to each other and the profession at large; third, the duties of the profession to the public. The question of ethics and consultation was thoroughly discussed by a number of members of the Society.

Unfinished Business: Dr. Harwell thanked the Society for their support in his recent difficulty with the Louisiana State Medical Society's Medical Defense Committee.

Dr. Tooke nominated Dr. L. T. Baker for a three-year term on the Shreveport-Caddo Parish Medical Unit. Dr. Hendrick seconded the nomination and Dr. Baker was unanimously elected.

The regular rules were suspended and Drs. C. H. Pardue and D. M. Pipes were elected to membership. The oath was administered to Dr. Pipes by the President, Dr. Pardue being absent.

New Business: Applications for membership were received from Drs. N. Judson Bender and D.

B. Daniel. The Society ordered that these petitions take the usual course.

Dr. Mays, Chairman of the Maternal and Infant Mortality Committee, introduced the following resolution: "That the Shreveport Medical Society approve the organization of a Maternal Center under the direct control of the Society." Dr. J. M. Gorton moved that this resolution be studied by the Executive Committee and a report be rendered at the next meeting. This motion duly seconded and carried.

Dr. Crebbin, one of the delegates to the State Society meeting, gave a brief report.

Paul D. Abramson, M. D., Sec.

## SCHUMPERT SANITARIUM

After dinner served in the hospital dining room, the staff meeting was called to order on April 14, 1936, by Dr. Geo. Garrett, President, with 19 members and 2 visitors present. The latter were introduced.

The minutes of the last two meetings were read and adopted.

Committee Reports: Dr. Atkins' committee reported favorably on the application of Dr. Youman for membership. He was unanimously elected.

Scientific Program: Dr. J. D. Youman presented an interesting discussion of vaginal uterine lithotomy, presenting this as an easier approach in the properly chosen cases. Two cases were discussed in which this method, for removal of stones was used.

This presentation was discussed by Dr. Stamper, who pointed out some of the difficulties to be avoided, and by Dr. Winder.

Dr. S. W. Boyce gave a case report concerning a white female, age 37 years, who developed Meniere's syndrome, apparently due to hemorrhage into the labyrinth. This report was discussed by Major Kinnard, Captain Corliss and Dr. Edwards.

The deaths for the past month were discussed.

Dr. George Garrett announced the Nurses' Graduation Exercises for May 5.

C. H. Webb, M. D., Sec.-Treas.

## NORTH LOUISIANA SANITARIUM

The North Louisiana Sanitarium Staff meeting was called to order on April 30, 1936, by the President with 21 members present. After the disposal of routine business, attention was turned to the scientific program.

Dr. J. M. Gorton reported a case of influenza, presenting multiple complications and expiring with a pleural and pericardial effusion and paralytic ileus. The case was discussed by Drs. Rigby, Cassity and Gowen.

Dr. M. D. Hargrove reported an interesting case of myxedema that had been previously diagnosed

as chronic nephritis and heart disease. Under thyroid therapy, the patient made rapid and gratifying progress with relief of distressing symptoms.

H. M. Trifon, M. D., Sec.

### TRI-STATE HOSPITAL

The meeting was called to order on April 23, 1936, by Dr. J. C. Willis, Sr., Chairman, with 20 members present.

Following disposal of routine business the scientific program was opened by Dr. W. B. Allums. He presented the case of a white male adult whose history revealed fever, malaise and mild pain in the right renal area for a period of four weeks. Physical examination elicited no findings of note except slight tenderness over the painful area. There was leukocytosis but no pyuria. The clue to the diagnosis was the presence of a furuncle on the neck eight weeks before hospitalization, suggesting the probability of a carbuncle on the kidney. Roentgenographic studies substantiated this, and at operation the abscess was drained. Recovery was uneventful.

The second case was presented by Dr. J. E. Knighton, Sr., and also illustrated the value of the history. This male adult complained of weakness and digestive disturbance, with low grade fever for three months. Examination revealed moderate anemia, enlargement and tenderness of the liver with no other findings of particular importance; the heart, lungs and renal system being normal. The leukocyte count was above 30,000, predominately neutrophils. Stool and proctoscopic examinations were negative. Despite the negative specific findings, and the absence of diarrhea at any time, a diagnosis of amebic hepatitis was made because of the history of eight years spent in the tropics. Specific therapy was instituted and marked improvement was prompt, including subjective symptoms, shrinking of the liver, and return to normal of the blood count.

Following the discussion of the statistical and mortality reports for the preceding month, the meeting adjourned. The next meeting will be held May 28, 1936.

J. E. Knighton, Jr., M. D., Acting Sec.

### FRENCH HOSPITAL

A regular meeting of the French Hospital was called to order on May 14, 1936, with Dr. L. J. Menville presiding, in the absence of the Chairman. The minutes of the last meeting were approved as read.

The discussion of deaths was then opened by Dr. Rougelot, who gave a brief account of Mr. G's history, the salient feature of this case being the unusual type of blood count. Dr. Harris explained that it is not unusual for the blood to throw out these atypical cells, which are probably of myelocytic origin, and that often the blood picture

resembles that of an acute infectious mononucleosis.

Dr. D. N. Silverman then presented a very interesting paper on "Carcinoma of the Stomach". His paper consisted of five cases with associated achylia-gastrica in their earlier period. They had no lesions demonstrable by roentgen ray, yet these patients all complained of symptoms referable to the stomach and eventually showed full grown carcinoma of the stomach.

Dr. Menville opened the discussion by stating that at the very best roentgenology is only correct 95 per cent of the times for diagnosis of gastric carcinoma and that until some definite means of diagnosing such cases as these is found they will have to go to more advanced stages until a more definite diagnosis can be made.

Drs. Harris and Gordon both discussed the value that gastroscopy would have in the early diagnosis of this type of lesion, concluding that it may be as great a value in this type of work as the cystoscopy in bladder work.

### MERCY HOSPITAL

The regular monthly meeting of the Mercy Hospital Staff was held on May 6, 1936, with Dr. E. L. Zander presiding in the absence of Dr. George Hauser.

This meeting was made very interesting by the excellent scientific presentation of Dr. J. K. Howles on the "Modern Treatment of Syphilis". The essayist described all the stages of syphilis and discussed the therapeutic agents of choice.

Drs. M. Campagna and E. R. Guidry presented a prenatal obstetrical case, 27 years of age, having hypertension and a pericarditis complicating pregnancy. The presentation of this case was for the purpose of discussing the manner in which the case may be treated.

Lloyd Hanckes, M. D., Sec.

### HOTEL DIEU

A joint meeting of the New Orleans Gynecological and Obstetrical Society and Hotel Dieu Staff was held Wednesday, April 22, 1936 at 8:00 p. m. in the Nurses' Lecture Room of Hotel Dieu.

The meeting was called to order by the President, Dr. E. H. Walet, and the Secretary, Dr. J. LaNasa, at the desk.

The scientific program consisted of:

- a. A Brief Resume of Ten Years of Gynecological Service at the Women's Dispensary—Dr. Etta McCormick.
- b. Premature Separation of the Normally Implanted Placenta—Dr. George Mayer. Discussed by Drs. Reddoch, Dixon and Hebert.
- c. A DeLee film, "Local Anesthesia in Obstetrics", was presented, courtesy of the Winthrop Chemical Company.



## J. T. NIX CLINIC

New Orleans

At a meeting held in May, 1936, Doctor A. E. Fossier read the following paper:

## HEPAPTOSIS

Hepaptosis must be defined as a dislocation or a dropping of the liver from its normal position especially when associated with visceroptosis or secondary to a descent of the abdominal organs. The term, hepaptosis, is thereby limited strictly to a ptosis of the liver due to its lack of or diminished support by the underlying visceral organs. All displacements of that organ caused by the bearing down influence of fluid in the thoracic cavity, by an enormously dilated heart, by an hepatic enlargement, or by trauma and shock, do not come under that interpretation.

The dropping of the liver was first discovered on the cadaver by Heister in 1754. In 1836 Ollivier wrote that the liver was frequently observed not to be in its normal position, but was dropped or displaced either totally or partially, and attributed these displacements to a defective conformation of the abdominal parietes. It was not until the year 1892, that Glenard, called attention to its association with splanchnoptosis and gave it the name of hepaptosis.

Andresen, in 1911, claimed that hepaptosis was often associated with ptosis of the viscera and deplored the fact that: "All careful observers see many of the so-called floating liver in the course of a year's practice, but the literature, which lately has abounded in articles relating to ptosis of the kidneys, stomach and colon, has been strangely lacking in reports of liver ptosis."

He could very well have made the same remark this day, for only a few cases have since been reported, the greatest majority of these having come from the pen of Italian observers.

Various hypotheses as to the cause of the descent of the liver have been advanced from time to time. Meisner thought that this hepatic dislocation was caused by the lengthening of the suspensory ligament of the liver, forming a peritoneal fold analogous to the one attached to the right hepatic lobe in many animals, which is known as the mesohepar.

Winkler wrote that the stretching of the ligament is passive and secondary; and that the primary cause is the sinking of the intra-abdominal pressure, most probably due to a relaxation of the abdominal walls caused by physical over-exertion, repeated strain on the abdominal walls, and also to a great extent to a rapid emaciation of the patient.

Landau has also expressed a somewhat similar view. He claimed, that the so-called ligaments of the liver are insufficient to hold up such a voluminous organ and that the fixation of the liver in its normal position is effected through the pressure of the abdominal muscles on the

viscera as well as by the elasticity of the lungs which arch up the diaphragm. He named this condition "twisted, rotated, or torsion liver." He has always observed it in connection with a floating kidney and the descent of the transverse colon.

Coffey has stated that in midline ptosis, which is an acquired visceral prolapse involving one or more of the organs which cross the midline of the abdomen, it is not uncommon to find the liver down.

Keith observed that in visceroptosis the liver is deformed and is more movable than normal, its right lobe being prolapsed into the right loin, under the tenth and eleventh costal cartilage, or the whole of the lower border of both the right and left lobes may be depressed 3.6 to 10 cm. (1 to 4 inches) below the costal margin.

The liver is only fixed posteriorly and is attached to the diaphragm by the mesohepar which is formed by the hepatic veins and the inferior vena cava, connective tissues and a reflection of the peritoneum. The broad or suspensory ligament is a thin membrane which passes inferiorly above and below the liver. In its natural position the falciform ligament forms a pocket which, with the diaphragm and the abdominal wall, encloses the convex upper part of the left lobe. Gray states that this ligament has no function of suspension. It is thus evident that the liver is only held by a hinge-like attachment of its posterior surface to the diaphragm by means of the mesohepar. The other ligaments of the liver, round, falciform or suspensory, and the right and left lateral assert only a negative support on that organ. Besides, the visceral surface of the liver rests on a visceral shelf which is formed by the right kidney, the hepatic flexure of the colon, the stomach, the first stage of the duodenum, the gastro-hepatic omentum, the pancreas and the celiac axis.

The supporting tendency of this shelf is diminished by various factors, among which are the relaxation of the abdominal walls, loss of ventral fat and defective postures; essential factors in visceroptosis.

Coffey, in summing up the peritoneal supports of the various organs anatomically, found "That in normal man the liver has actually fused with the diaphragm at its back. The free margin is supported at its middle by that part of the primitive ventral mesogastrium which remains in the form of the falciform ligament."

There is a moderate degree of displacement of the liver in every case of visceroptosis. The relativity between the degree of the hepaptosis and the intensity of the splanchnoptosis is nearly always constant.

Whenever there is a flattening of the convexity of the diaphragm there is a ptosis of the liver. Although the dome of the diaphragm may be de-

pressed by the weight of the fluid in the pleural cavity, a consolidation of the lung, an enlarged heart, and to other factors besides a lessening of the intra-abdominal pressure, it is not difficult to make a differential diagnosis. A wandering liver, that is, when the organ is situated in the lower abdomen and totally ptosed, is recognized without difficulty because it is easily palpated and its size and position readily determined. These cases are comparatively rare, but when the hepaptosis is only partial and the displacement is only very slight, a diagnosis is more difficult to make and demands more skill and experience on the part of the clinician.

The size of the normal liver varies in different individuals. There is no accurate basis or standard by which we can determine the individual normality of that organ. A perusal of our text books is sufficient to confirm this statement. The same thing may be said of the heart and the aorta, for we have no definite determinant by which we can accurately determine their individual normality. The size of these organs varies with the age, sex, size and bodily conformation of the individual<sup>1</sup>.

The normal lower liver border extends approximately to the lower margin of the costal arch and considerably beyond the median line even to the left mid-clavicular line. The topographic anatomy of the normal liver varies with the stature of the individual and his skeletal peculiarities, especially of the thorax.

The sthenic and hypersthenic types of man are characterized by a short, wide and deep thorax with a very obtuse intercostal angle. The liver is broad in its horizontal dimensions and narrow in its longitudinal. In the asthenic and hyposthenic types of bodily conformation the thorax is long and narrow and the intercostal angle is very acute. The horizontal dimensions of the liver are narrow and the longitudinal are broad.

In hepaptosis the right vault of the diaphragm is flattened to a considerable degree and the inferior limit of the liver extends below the costal arch and occupies an abnormally low position in the abdominal cavity. Both the superior and inferior areas of hepatic dullness are lowered. The liver assumes a more longitudinal position, its horizontal dimensions are decreased, so much so that frequently the left border is found at or extending but slightly beyond the median line. As the liver loosens its support because of a diminishing intra-abdominal pressure it becomes ptosed by rotating in a forward, downward and right lateral direction.

The size of a normal liver in the right mid-clavicular line may be established by the following determinant: the upper liver border corresponds with the upper limits of absolute hepatic dullness, the line of attachment of the diaphragm

to the thoracic wall. The lower border of the organ extends to, and not beyond, the lower border of the ribs.

Hepaptosis may simulate enlargement of the liver, because the increase in weight of the diseased organ has a tendency to ptose it. In such instances the liver is movable only in its vertical axis; it drops when the patient stands and can be easily replaced in its normal position on lying down. The upper limit of liver dullness is but slightly lowered if at all, and the convex surface is readily palpable.

An important diagnostic point in hepaptosis is the replacement of the liver by gentle upward pressure applied to the right side of the abdomen, and when this pressure is released, the liver will sag in its previous ptotic position.

I have seen many cases in which the hepaptosis was corrected and the liver maintained in its normal position by means of a properly fitted abdominal support, and permanent results achieved by increasing the intra-abdominal pressure by making ventral fat and strengthening the belly muscles.

#### BIBLIOGRAPHY

1. Fossier, A. E.: Size of the normal heart, *J. A. M. A.*, 82:2016, 1924.
- Fossier, A. E.: The thoracic aorta: The determination of its normal size, *N. O. Med. and Surg. J.*, 78:318, 1935.

#### OSCAR ALLEN TUMOR CLINIC Charity Hospital NEW ORLEANS

The Scientific meeting of May was called by Doctor James T. Nix, Director. The essayist was Dr. J. M. Miles, who presented the following paper:

#### SOME FACTORS INFLUENCING THE ROENTGEN RAY THERAPY OF NEOPLASMS

The application of therapeutic roentgen ray is far from a simple procedure, especially in the treatment of neoplasms. The lack of standardized procedures is the result of increasing information on the subject of cellular pathology and the technical improvements in methods of administration of the roentgen ray which have marked the advance of the science of radiology.

In tumor therapy, more specifically in the case of malignant tumors, one strives, in general, to obtain the maximum irradiation of the tumor cells without destroying the normal cells forming the "tumor bed". In the course of such therapy a complication may arise which seldom occurs in the much "lighter" therapy of non-tumorous conditions.

Keloids furnish a simple example. We find them particularly in the Negro race, often on the neck or face where, because of cosmetic reasons, therapy is desired. Our object is to so af-

fect the proliferating fibrous tissue by the roentgen ray that it ceases to grow and even recedes.

Roentgen ray applications reduce the size of the keloids but, in many cases, produce a depigmentation of the skin over the keloid resulting in a more unsightly lesion than the original. Because of this particular complication more conservative therapy is indicated than would otherwise be the case.

#### DIFFERENCE IN CELLULAR TYPE

No doubt one of the greatest deterrents to satisfactory irradiation effect is the destructive influence upon the "tumor bed" and overlying normal tissue. The difference in sensitivity of the tumor and the normal tissue surrounding it determines the factor of safety in applying the roentgen ray.

An osteosarcoma cannot be satisfactorily treated because it, as bone, is more resistant than the overlying skin. On the other hand, an enlarged spleen is very satisfactorily treated because, as lymphoid tissue, it is much more radiosensitive than the surrounding structures. A lymphosarcoma in the tonsillar region responds better to irradiation than a spindle cell sarcoma of the same size and location.

#### INFECTION AND DISEASE

In the presence of infection the resistance of the non-tumorous cells is lowered to such an extent that they may tolerate only half the irradiation they would were the infection first cleared up. The naso-pharynx and the cervix of the uterus are important in this respect. Irradiation that would be tolerated normally, may, in the presence of infection, produce necrosis of the tumor bed without affecting the tumor itself and hasten instead of retard the extension of the growth.

Caution is also necessary in the presence of associated diseases such as syphilis, diabetes, and arteriosclerosis. Nutrition to the part is already impaired and the cells are less able to recuperate from the irradiation.

As an example of impaired nutrition we can consider skin grafts following burns, since it is not uncommon for epitheliomata to arise in such areas. Fortunately in such cases the poor blood supply which lowers the resistance of the engrafted tissue goes hand-in-hand with a poor lymphatic supply and an abundance of fibrous tissue which limit the spread of the carcinoma.

#### IRRADIATION OF ADJACENT STRUCTURES

The irradiation of neighboring organs cannot be avoided but its effect can be minimized by the use of multiple portals and the avoidance of overlapping of the roentgen ray beams at the site of these organs.

In the treatment of a carcinoma of the cervix, the bladder or rectum may receive excessive irradiation, especially if the beam is directed at

an angle toward the cervix in an attempt to concentrate the irradiation at that point. A proctitis may result, from intensive combined radium and roentgen ray therapy, ulceration of the bladder mucosa, vesicovaginal fistulae, and benign strictures of the rectum have been reported.

In other regions of the body there have been reported nephritis following irradiation of the kidneys; Addison's disease, the adrenals; myxedema, the thyroid; perforation of the intestine, the abdomen. None of these have we experienced.

Fibrosis of the lung we have seen following irradiation of the lymphatic area of the breast. Always to be considered is the effect upon the metaphysis in a growing child in which irradiation may produce a retardation in the growth of the bone with shortening.

Irradiation of the ovaries and testicles should, of course, be avoided when possible. Aside from sterilization and menopause there is the possibility that, due to injury to the genes, a monstrosity may be born in present or future generations.

#### SPECIAL RULES AND GENERAL OBSERVATIONS

Anaplastic cells (embryonic type) are more radiosensitive but also recur more readily than do the more adult or differentiated cells.

Build up patient's general condition prior to therapy.

Clear up infections before irradiation.

Do not forget to make sure that the proper filters are in place before applying a roentgen ray treatment.

Extract badly diseased teeth *before* irradiating the jaw.

Fever occurring during treatment indicates either a latent infection or rapid tumor necrosis with resulting toxicity.

Grading of tumors is essential to proper therapy.

High kilovoltage (short wave-length) and heavy filtration spare the skin and deliver a relatively greater dose into the tumor.

Individualize the treatments.

Judge the result of therapy by the psychological effect upon the patient as well as tumor recession or amelioration of symptoms.

Keep complete records.

Liver extract has to date been our greatest aid in overcoming irradiation sickness.

Multiple portals help to deliver a maximum roentgen ray dose into the tumor.

Nuclear division is the time of greatest sensitivity in the cell.

Over-irradiation destroys the tumor bed.

Prolonged treatment sufficient to allow division of all the cells in the tumor is most likely to be successful.



Question the patient concerning previous irradiation.

Radio resistance is increased by insufficient treatment.

Sensitivity of the tumor is dependent upon many factors including histologic type of cell, grading, location, age of the patient, and previous irradiation.

The effect of irradiation is believed to be due more to the effect upon the tumor bed than to direct action upon the neoplastic cells.

Uniform distribution of roentgen ray is essential for treatment of the lymphatic drainage area.

Very intensive irradiation will aggravate the patient's condition.

Watch closely for complication.

Examine the skin before each treatment.

Young patients have a greater skin sensitivity and need closer observation.

Zenith of success is obtained when not one method but a combination of all or any of the accepted methods of surgery, radium or roentgen ray are used.

#### THE HUTCHINSON MEMORIAL CLINIC

*Scientific Section:* Symposium on Amebiasis, conducted by the Department of Tropical Medicine, Col. Charles F. Craig presiding.

Dr. E. C. Faust (Department of Tropical Medicine, Division of Parasitology): Amebiasis is the state of being infected with the protozoan organism, *Endamoeba histolytica*. There are other parasitic amebae of man which require differentiation from *Endamoeba histolytica*. In the stool commonly we have three nonpathogenic types to deal with: (1) *Endamoeba coli*, (2) *Endolimax nana*, and (3) *Iodamoeba butschlii*. Unfortunately, we have to make routine fecal examinations in order to differentiate these species from *Endamoeba histolytica*.

Referring particularly to *Endamoeba histolytica*, this organism is an obligatory parasite of man. In the human host, as far as it is known, it is always a tissue parasite. These organisms live for the most part in the intestinal tract but by the blood stream and other methods of transfer get into the liver and to a lesser extent in other organs and tissues of the body, propagating in the tissues by binary fission. Approximately 95 per cent of all lesions occur in the large bowel and a very small percentage may be found in the lower segments of the small bowel. The active organism, which has colonized in the tissues of the intestinal wall, is discharged from the lesions and passes down the lumen of the bowel. If putrefaction or fermentation is excessive, it may disintegrate in transit to the anus and not be found in the fecal material that is passed. In unformed stools, or those with a watery, mucus or muco-

sanguineous consistency, the amebae are usually discharged in the active, unencysted state and rarely encyst in the passed feces. In formed stools the organisms are uniformly passed in the encysted state. In semiformed stools it may be possible to find trophozoites, precysts and cysts, either separately or at the same time, at the time the stool is passed. In less than an hour encystation of all the amebae will usually have occurred.

Since the cyst alone is infective, trophozoites discharged in cases of amebic dysentery do not constitute a menace to society; on the other hand, "cyst passers" usually free of manifest symptoms, constitute a constant danger.

A cyst ripens by a two-fold division of its nucleus; this four-nucleate cyst is considered to be most infective. It is not only slightly resistant to desiccation or to putrefaction of the medium in which it is found, but will remain viable for many weeks when washed and placed in distilled water. It will usually survive for several days in feces placed in the ice-box. On being swallowed the viable ripe cyst passes through the stomach uninjured. In the intestinal juices a double phenomenon takes place: partly on account of the intestinal juices and partly on account of activation of the protoplasm within, the cell wall disrupts. Each nucleus now divides in two, making a total of eight nuclei from each cyst. These eight nuclei, each surrounded by a small mass of cytoplasm, pass down into the large bowel, and on apposition to the cells of the crypts or to those on the interglandular prominences, they become lodged and by lytic and mechanical means work their way into the mucosa and multiply.

At least 5 per cent of the population of the United States harbors *Endamoeba histolytica*. In some communities, as in rural Tennessee and certain parts of the State of Virginia, the infection percentage reaches between 25 to 50 per cent. The corrected rate for out patients in the charity population of residents of New Orleans is 13.2 per cent. A conservative estimate indicates that 200,000 persons in the State of Louisiana are infected with *Endamoeba histolytica*. It is uncommon in infants but increases with age, at least to middle life. While I do not recognize a nonpathogenic race of *Endamoeba histolytica*, there is now some evidence of intrinsic differences in strain virulence or pathogenicity, and while there appears to be no individual human host resistance to infection, there is probably definite group resistance to clinical manifestations.

Where gross contamination of water by visible cysts occurs, water-borne epidemics may develop, as in the Philippines and Canal Zone before sanitary water systems were installed, and more re-

cently in two hotels and in the stockyards in Chicago, but this cannot account for the widespread distribution of the organism in man. The most plausible explanation is that of food contaminated by: (1) food handlers or (2) flies. Examination of food handlers frequently shows a higher percentage of "carriers" than the average population, and experimentally flies have been found to transfer the cysts of *Endamoeba histolytica* from feces to food. Yet food, as far as I know, has never been actually incriminated in nature, and the problem of the epidemiology of endemic amebiasis is still unsolved.

Dr. Duval (Department of Pathology): The part that has been assigned to me in this symposium concerns the pathology of amebiasis. I would first like to say that of all the intestinal infections, amebiasis gives rise to lesions that are so striking and characteristic that they are not to be confused with the pathology of any other intestinal tract infection. There is, however, one exception, namely, the lesion of chronic bacillary dysentery. The intestinal ulcers in typhoid fever, tuberculosis and acute bacillary dysentery are readily told by the naked eye from the lesion of amebiasis.

In order to make plain the gross and microscopic changes for the tissues in amebiasis, I will present a number of lantern slides. The lantern slides show both the naked eye and microscopic lesions of amebiasis for the intestinal tract and the liver. As you know, the earliest changes in an intestinal amebiasis occur for the large bowel and at the various flexures. This explains why the earliest lesions are seen in the cecum, hepatic, splenic and sigmoid regions. The earliest gross change is that of a circumscribed hillock or nodule, with the overlying mucous membrane unbroken. Later these mucosal hillocks become ulcerated and still later, these ulcers become quite deep, involving all coats of the bowel. The ulcers early present a characteristic appearance, namely, they are more or less wedge-shaped with the base down in the gut wall. The opening of the ulcer is comparatively small and presents edges that are heaped up and overhanging. The fact that the ulcers are so much more extensive in the submucous tissues of the bowel explains the "honeycombing" of the intestinal wall through the ulcerative communication. A striking feature of the advanced intestinal ulceration in amebiasis is that one may pass a probe down into an ulcer and bring it out through another ulcer, the opening of which is some distance away.

Microscopically, the lesion of intestinal amebiasis is one of necrosis and subacute inflammation, which is characterized by a moderate degree of lymphocytic infiltration. The necrosis seems to be produced through the pressure upon the in-

vaded tissues by the *Endamoeba histolytica*. In other words, preceding the necrosis there is pressure trophy. Following the necrosis, ulceration occurs with a sloughing out of the necrotic tissue. Subsequently, secondary pyogenic infection occurs for the ulcerative tissues. This explains the presence in the amebic lesion of large numbers of neutrophils. Later in the process there appears considerable fibrosis which tends to heal the ulcers and, at the same time, produces considerable thickening of the intestinal wall.

Col. Charles F. Craig (Department of Tropical Medicine): As regards the subject of symptomatology of amebiasis it is a rather difficult one to discuss because the symptoms are protean in character. They depend upon the degree of pathology, but for convenience of description the cases may be divided into four clinical classes, i. e. (1) the carrier with no definite symptoms of the infection; (2) the carrier with mild or indefinite symptoms of infection; (3) the patient showing intermittent attacks of mild or severe diarrhea and constipation, and (4) cases showing symptoms of acute, subacute or chronic amebic dysentery. The treatment of these various stages is not the same and for this reason their recognition is important.

Class I. *Carriers without symptoms*: It is unfortunate that in an infection in which from 5 to 10 per cent of the people harbor the organism there are so many who do not show any definite symptoms of the infection. It may be roughly stated that approximately 50 to 60 per cent of infections do not show any definite clinical symptoms. This does not mean, of course, that they may never develop symptoms, but only if examined at one time this proportion of symptomless carriers will usually be found.

Class II. *Carriers who show mild or indefinite symptoms*: This class is a large one and consists of those who present very mild attacks of diarrhea or indefinite symptoms connected with the digestive tract. Such symptoms consist in gaseous eructations, colicky pains in the abdomen, tenderness of various areas of the abdomen, headache and the symptoms usually seen in a mild toxic condition. These symptoms are not peculiar to amebiasis as they occur in many other disease conditions of the intestinal tract but they should always suggest a stool examination because they are frequently caused by *Endamoeba histolytica*.

Class III. *Patients showing intermittent attacks of mild or severe diarrhea and constipation*: Patients in this class are those who suffer from attacks of diarrhea alternating with constipation or normal bowel movements. They also present the symptoms that are present in Class II and only differ in that they do have more or less severe attacks of diarrhea which last from one or two to several days.

Class IV. *Cases showing symptoms of acute, subacute or chronic amebic dysentery*: It is not necessary for me to discuss these symptoms here as you are all well acquainted with them.

The important point to remember regarding the symptomatology of amebiasis is that definite ulceration may be present in the intestine without any definite symptomatology. Dr. Faust has emphasized the fact that *Endamoeba histolytica* is a tissue parasite and lives in the tissues of the intestine or elsewhere in the body. Thus there is no such thing, from the standpoint of pathology, as a perfectly healthy carrier of this parasite. Lesions, however small in size, are always present, and in such cases an amebic abscess of the liver may develop, although there have been no symptoms of diarrhea or dysentery.

The recognition of the four symptomatic classes of amebiasis that have been mentioned is most important from the standpoint of treatment. We would not think of treating a carrier with or without symptoms in the same manner as we would treat a case of acute amebic dysentery. Therefore, in considering the treatment we must consider the treatment of each of the classes separately.

For the treatment of carriers with or without symptoms (Class I or Class II) we have three drugs that are very efficient, i.e. chiniofon, vioform and carbarsone. Chiniofon and vioform depend for their efficiency upon their iodine content, while carbarsone depends for its efficiency upon its arsenic content.

Chiniofon is given in the form of tablets or pills each containing 4 grains (0.25 grams) and the dose for a one hundred and fifty pound adult is four pills three times daily. This drug has been used for a period of many years and possesses very little toxicity. The symptoms which are produced by it and which are sometimes thought to be toxic are abdominal colic and diarrhea. The diarrhea, if not excessive, is not harmful in that it carries away a large number of amebae that might not have been destroyed by the drug. In giving the drug it is well to begin with a small dose, as two or three tablets three times daily, and watch the effect as regards the occurrence of diarrhea. For the treatment of carriers with or without symptoms three or four pills should be given three times daily for a period of seven to ten days, preferably eight days for the average adult. In most carriers one course of treatment will rid them of their infection, but if a stool examination at the conclusion of treatment or afterwards shows the amebae the course may be repeated, and it is my experience that most cases will be cured. If not, vioform may be tried or carbarsone may be administered.

Vioform is dispensed in gelatin capsule containing 4 grains (0.25 grams). The dose is one

capsule three times daily for ten days, an intermission of one week and one capsule three times daily for another ten days. In some cases that have not responded to chiniofon this treatment is efficient.

If neither chiniofon nor vioform is efficient, carbarsone should be administered, in capsules each containing 4 grains (0.25 grams), the dose being one capsule twice a day for ten days. The course of treatment may be repeated after a week or two if the first course has not been successful.

In the treatment of Class III cases, i. e. those having attacks of diarrhea, emetine hydrochloride should be used to control the diarrhea if it is severe. After the diarrhea has been controlled a course of chiniofon, vioform or carbarsone should be given. The treatment of acute amebic dysentery and of the exacerbations of subacute or chronic amebic dysentery consists in controlling the symptoms with emetine hydrochloride followed by a course or courses of chiniofon, vioform or carbarsone.

In administering emetine hydrochloride the dose is one grain per day administered subcutaneously and no more than 12 grains should be administered during a course of treatment. Usually the symptoms of diarrhea or dysentery are controlled by emetine after the administration of the drug for seven to eight days. This drug is much abused by the medical profession in the treatment of amebiasis. It can not be relied upon to cure the infection, as in my experience over 80 per cent of patients treated with emetine hydrochloride alone show amebae in their stools within one month after completion of the treatment. It is, however, a wonderful drug for controlling the symptoms of diarrhea or dysentery, but after these symptoms have been controlled, emetine should be stopped and one of the other amebicidal drugs should be administered.

I desire to say in concluding my discussion of the treatment of amebiasis that I believe that every individual who has been shown to be infected with this parasite should receive treatment sufficient to rid him of the infection. From my personal experience I am impressed with the necessity of treating these cases because of the considerable number of instances in which amebic abscess of the liver has developed in symptomless carriers and because of the occurrence of acute symptoms of diarrhea or dysentery in people who carried the organism for long periods of time without symptoms. The time to treat infection with *Endamoeba histolytica* is as soon as the infection is discovered, whether symptoms are present or absent.

As regards the prophylaxis of amebiasis it is the same as that of all diseases caused by the ingestion of contaminated food or drink: filtration of water supplies; the proper screening of food



supplies from flies and other insects, and the examination and treatment of food handlers employed in public eating places or in the home, are the important prophylactic measures that should be insisted upon in otherwise well sanitized districts. It is undoubtedly true that the greatest of all sources of amebiasis is the infected food handler and the discovery and treatment of these people is of prime importance in the prophylaxis of infection.

The practicing physician can do a great deal

in preventing amebiasis by being on the look out for symptoms which may be produced by it and properly treating patients whose stools have been examined and found positive for the parasite. It should be remembered that amebiasis is a familial infection, that if one member of the family is found infected it is probable that other members will also be found infected. Therefore it is important to examine the stools of all the members of a family in which one member has been found to be infected with *Endamoeba histolytica*.

## TRANSACTIONS OF ORLEANS PARISH MEDICAL SOCIETY

### CALENDAR

JUNE 1 Board of Directors, Orleans Parish Medical Society, 8 p. m.

JUNE 1 Eye, Ear, Nose and Throat Hospital Staff, 8 p. m.

JUNE 3 Clinico-Pathological Conference, Touro Infirmary, 11:15 a. m. to 12:15 p. m.

JUNE 3 Mercy Hospital Staff, 8 p. m.

JUNE 5 Pathological Conference, Hotel Dieu, 11 a. m. to 12 noon.

JUNE 8 ORLEANS PARISH MEDICAL SOCIETY, 8 p. m.

JUNE 9 Charity Hospital Dental Staff, 8 p. m.

JUNE 10 Touro Infirmary Staff, 8 p. m.

JUNE 12 Pathological Conference, Hotel Dieu, 11 a. m. to 12 noon.

JUNE 12 French Hospital Staff, 8 p. m.

JUNE 15 Hotel Dieu Staff, 8 p. m.

JUNE 16 Charity Hospital Medical Staff, 8 p. m.

JUNE 17 Clinico-Pathological Conference Touro Infirmary, 11:15 a. m. to 12:15 p. m.

JUNE 17 Charity Hospital Surgical Staff, 8 p. m.

JUNE 17 1st and 2nd District Dental Society, 8 p. m.

JUNE 18 Eye, Ear, Nose and Throat Club, 8 p. m.

JUNE 19 Pathological Conference, Hotel Dieu, 11 a. m. to 12 Noon.

JUNE 19 I. C. R. R. Hospital Staff, 12 noon.

JUNE 22 ORLEANS PARISH MEDICAL SOCIETY, 8 p. m.

JUNE 23 Baptist Hospital Staff, 8 p. m.

JUNE 24 Clinico-Pathological Conference, Touro Infirmary, 11:15 a. m. to 12:15 p. m.

JUNE 26 Pathological Conference, Hotel Dieu, 11 a. m. to 12 noon.

During the month of May, besides the regular meeting of the Board of Directors, the Society held two regular scientific meetings as follows:

#### May 11—Acute Appendicitis

(Subject for Longer Life Week)

Dr. Frederick Fenno, President, gave a brief

explanation of Longer Life Week.

Report of Longer Life Week Committee for 1936—Dr. George D. Feldner.

Acute Appendicitis as the Pediatrician Sees It—Dr. John Signorelli.

Acute Appendicitis as the Medical Man Sees It—Dr. Oscar W. Bethea.

The Surgical Aspects of Acute Appendicitis—Dr. Ambrose H. Storck.

The Presentation of Acute Appendicitis in Standard Textbooks and Systems. Dr. Frederick Fitzherbert Boyce, Acting Chairman of the Longer Life Week Committee.

Acute Appendicitis as a Community Health Problem—Dr. C. C. Dauer.

The Mortality of Acute Appendicitis in the Hospitals of New Orleans. (This was the report of the data compiled by the Longer Life Week Committee. The work was done by Dr. Paul B. Cameron and Dr. F. F. Boyce, and the report was read by Dr. Nathan H. Polmer.)

May 25, 1936, the following program was presented:

Postoperative Pulmonary Complications.

By Drs. J. Ross Veal and Benjamin Van Werden.

Discussed by Dr. Edgar Hull.

Diabetic Infection and Gangrene.

By Dr. Manuel Gardberg.

Discussed by Dr. James D. Rives.

The Role of the Semilunar Cartilage in the Football Knee.

By Dr. H. Theodore Simon.

Discussed by Dr. Lucian H. Landry.

The annual Longer Life Week sponsored by the Orleans Parish Medical Society was observed May 18-23, and was devoted entirely to the subject of acute appendicitis. The following committee worked very hard to make this week a success: Dr. Urban Maes, Chairman, Drs. Frederick F. Boyce and Paul B. Cameron, Vice-Chairmen, and Drs. Nathan H. Polmer and George D. Feldner as

the other members. Civic and luncheon clubs, high schools, universities, members of the Society, druggists and business houses cooperated in this movement. Stickers and posters were sent to the druggists and business houses. Small stickers were sent to the doctors to be placed on their bills:

WARNING

In the presence of abdominal pain  
Never take laxatives or purgatives.  
Take nothing by mouth.  
Call your family doctor.

The Orleans Parish Medical Society

Members of the Society gave talks over the radio, and before schools and luncheon clubs, and we wish to thank every one of them for their cooperation.

In the Bulletin of the Orleans Parish Medical Society dated May 11, 1936, an editorial appeared regarding telephone calls for subscriptions of all kinds. When such calls come in, the doctors are urged to use the same answer, "Sorry—not interested", and it is felt that the persons who are employed by the higher ups in these rackets to sit down and call up every doctor in the City of New Orleans would soon report that the field is not as fertile as it was always believed to have been. Of course some discrimination will have to be practiced, but we feel sure that every member of this Society knows the type of solicitor of whom we are speaking.

Dr. Robert A. Strong was a guest speaker before the Arkansas State Pediatric Society in Hot Springs on Monday, April 27.

Drs. I. M. Gage and Alton Ochsner attended the meetings of the American Association for Thoracic Surgery at Rochester, Minnesota and the American Surgical Association at Chicago.

Dr. John Signorelli was a guest at the Alabama State Medical Society which met in Montgomery.

The following members of the Orleans Parish Medical Society attended the recent meeting of the American Medical Association: Drs. Chas. A. Bahn, C. C. Bass, Elizabeth Bass, Geo. C. Battalora, Paul B. Cameron, Jos. A. Danna, L. R. DeBuys, Roy E. de la Houssaye, I. M. Gage, T. T. Gately, Julian Graubarth, James K. Howles, R. H. Kampmeier, Jerome E. Landry, Francis E. LeJeune, I. I. Lemann, A. L. Levin, John H. Musser, Alton Ochsner, Geo. W. Robinson, P. B. Salatich, Wm. H. Seemann, Thos. B. Sellers, Wilbur C. Smith, Robert A. Strong, N. F. Thiberge, J. Ross Veal, Emmerich von Haam and H. W. E. Walther.

Drs. Rigney D'Aunoy and Emmerich von Haam received the gold medal of the American Society of Clinical Pathologists for the work they have done in research on lymphogranuloma inguinale.

Dr. L. R. DeBuys was installed as President of the American Academy of Pediatrics.

Three New Orleans doctors were made chairmen of sections of the American Medical Association: Dr. John H. Musser, Chairman of the Section on Medicine; Dr. Alton Ochsner, Vice-Chairman, Section on Surgery; and Dr. H. W. E. Walther, Chairman of the Section on Urology.

Dr. Urban Maes attended the meetings of the Medical Society of the State of New York in New York City (where he was one of the guest speakers), the American Surgical Association in Chicago, and the Society of Clinical Surgery at the Mayo Clinic in Rochester.

The following doctors were elected to Membership:

ACTIVE MEMBERSHIP

Dr. Edwin R. Guidry

INTERNE MEMBERSHIP

Drs. Otis F. Gay, Bruno F. Mancuso, Stuart N.

Nicholas and Jos. A. Vella

It is with the deepest regret that we report the loss by death of two of our Active Members: Dr. Foster M. Johns, our First Vice-President, and Dr. J. W. Newman.

TREASURER'S REPORT

ACTUAL BOOK BALANCE: 3/31/36.....	\$2,707.42
April credits .....	711.11

TOTAL CREDITS: .....	\$3,418.53
Expenditures: .....	807.26

ACTUAL BOOK BALANCE: 4/30/36.....	\$2,611.27
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LIBRARIAN'S REPORT

During April, 46 books were added to the Library. Of these 9 were received by gift, 19 by binding and 18 from the New Orleans Medical and Surgical Journal. Notation of new titles of recent date is given below.

The Library has loaned 787 books and journals to doctors during the month, or approximately 1½ to each member of the Society. In addition 894 volumes were loaned to students for overnight use, making a total of 1681. These figures do not include the great use of books and journals within the Reading Rooms.

On request of physicians, members of the staff have collected material on the following subjects in April—

Endemic typhus.  
Injuries of knee.  
Hormone therapy.  
Carcinoma of common bile duct.  
Angiosarcoma.  
Injuries in sport.

Influence of phosphates on the rate of absorption in glucose.  
 Treatment of Fordyce disease.  
 Books for the blind.  
 Nephrosis in children.  
 Epidemiology of typhus.  
 Plantation medicine.  
 Fibroma of ovary.  
 Biography of Dr. Bennett Dowler.  
 Medical library work.  
 Diagnosis of typhus.

#### NEW BOOKS—April

American Otological Society—Transactions. 1935.  
 U. S.—Navy Department—Statistics of Diseases and Injuries in U. S. Navy. 1934.  
 Crossen, H. S.—Diseases of Women. 1935.  
 Krafft-Ebing, R. von—Psychopathia Sexualis. 1935.  
 Marriott, W. M.—Infant Nutrition. 1935.  
 Ross, J. S. and Fairlee, H. P.—Handbook of Anesthetics. 1935.  
 Rosenau, M. J.—Preventive Medicine and Hygiene. 1935.  
 Pharmacopoeia of the U. S. 11th ed. 1936.  
 Taussig, F. J.—Abortion, Spontaneous and Induced. 1936.  
 Christopher, Frederick, ed.—Textbook of Surgery. 1936.

Solomon, Charles—Prescription Writing and Formulary. 1935.  
 Dodge, C. W.—Medical Mycology. 1935.  
 Becker, S. W.—Common Diseases of the Skin. 1935.  
 Barga, J. A.—Management of Colitis. 1935.  
 Johnson, W. M.—True Physician. 1936.  
 Boyd, William—Pathology of Internal Diseases. 1935.  
 Bannister, H.—Psychology and Health. 1935.  
 Beaman, A. G.—Doctor's Odyssey. 1935.  
 Duke University—Law School—Expert Testimony. 1935.  
 Lord, F. T. and Heffron, Roderick—Lobar Pneumonia and Serum Therapy. 1936.  
 Hayner, J. C.—Regional Anatomy. 1935.  
 U. S.—Census Bureau—Mortality Statistics. 1933.  
 Rubenstein, I. H.—Legal Aspects of Christian Science. 1935.  
 Matsner, E. M.—Technique of Contraception. 1936.  
 Julius Rosenwald Fund—New Aspects of Medical Service. 1936.  
 N. Y. Post-Graduate Medical School and Hospital—Collected Studies of Department of Pathology and Bacteriology. 1930-35. 1936.  
 Gilbert C. Anderson, M.D., Secretary.

## LOUISIANA STATE MEDICAL SOCIETY NEWS

### THE LAKE CHARLES MEETING

The Lake Charles Meeting is a thing of the past but the memory of the splendid scientific papers and more particularly the recollection of the delightful time members of the State Society had, will linger. The entertainments were delightful and the reception to visiting doctors by the Lake Charles men was cordiality itself.

Dr. R. P. Howell did splendid work as General Chairman of the meeting. The members of the sub-committees were assiduous in their attention to the visitors and did everything to make their visit not only profitable from an educational point of view but enjoyable from a social aspect. The members of the State Society who attended this meeting certainly owe a debt of gratitude to the Chairmen of the Committees and their Committee-men.

Might you invite us again?

The Louisiana Gynecological and Obstetrical Society was permanently organized in Lake Charles, Louisiana, at the State Medical Society Meeting.

Dr. Peter Graffagnino was elected President, Dr. E. L. King, Vice-President, Dr. Walter Levy, Secretary-Treasurer, and Dr. H. B. Alsbrook was appointed Chairman of the program.

The organization is planned to sponsor better obstetrics and gynecology in the state. The membership will be limited to fifty members and, only those belonging to some gynecological or obstetrical club or the American College of Surgeons are eligible for membership.

The next meeting will be held in conjunction with the State Medical Society in Monroe in 1937..

### NEWS ITEMS

Dr. Lawrence R. DeBuys was honored by election as President of the American Academy of Pediatrics.

Dr. H. W. E. Walther was selected as Chairman of the Section on Urology at the recent meeting of the American Medical Association.

Dr. Atton Ochsner was elected to the office of Vice-Chairman of the Section on Surgery by the American Medical Association.

The First National Conference on Fever Therapy will be held at Columbia University, New York City, September 29-October 3, 1936.

During the course of the year 1936 the following



International Congresses will take place in Vienna: The International Congress of Dentistry, the Congress of Roentgenologists, the Congress of the International Society for Urology, the Medical Hydrology Congress and the International Congress of Catholic Physicians.

Dr. John H. J. Upham, Columbus, Ohio, for many years on the Board of Trustees of the American Medical Association, was honored by the organization in being selected President-Elect for the ensuing year.

Dr. Charles Gordon Heyd of New York was unanimously elected Vice-President of the American Medical Association at the Kansas City Meeting, May 14. Owing to the sad illness of Dr. Mason, Dr. Heyd will presumably succeed to the Presidency.

Assistant Surgeon Ralph W. Carr of the U. S. P. H. S. has been ordered to the U. S. Marine Hospital, New Orleans, for duty.

Medical Director L. L. Lumsden, now in New Orleans, was ordered, to the University of Michigan to assist in a training course for the personnel to be employed under the Social Security program.

The Cornell University short course in hospital operation will be held in the two weeks beginning June 29.

#### FACULTY OF THE TULANE GRADUATE SCHOOL OF MEDICINE

The following attended the meeting of the Louisiana State Medical Society at Lake Charles, La., April 27, 28 and 29, when Dr. H. W. Kostmayer, Dean and head of the department of gynecology, was inducted as president of that society:

Jas. E. Bailey	E. L. Leckert
E. R. Bowie	J. D. Martin
M. Earle Brown	Harry Meyer
D. C. Brown	Neal Owen
W. R. Buffington	Rawley M. Penick
L. L. Cazenavette	Wm. H. Perkins
Wm. B. Clark	Jno. G. Pratt
Isidore Cohn	Wm. H. Seemann
E. McC. Connely	T. B. Sellers
Allen C. Eustis	D. N. Silverman
F. L. Fenno	P. T. Talbot
E. S. Hatch	M. T. Van Studdiford
C. S. Holbrook	W. A. Wagner
	Willard R. Wirth

Dr. Walter E. Levy, chief of the division of obstetrics, addressed the meeting, his subject being "A Comparative Gynecological and Obstetrical Study of the White and Colored Races."

Dr. Walter J. Otis, assistant professor of clinical neurology and of clinical psychiatry, attended a meeting of the American Association for the Study of Mental Deficiency and the American Psychiatric Association for the Study of Mental Deficiency and the American Psychiatric Association held at St. Louis, Mo., the week beginning May 4, 1936.

Dr. H. W. Kostmayer, Dean and head of the department of gynecology, also attended the meeting of the American Board of Obstetrics and Gynecology, and a meeting of the American Medical Association held at Kansas City, Mo., May 11 to the 15.

Dr. Elizabeth Bass attended the meeting of the Medical Women's National Association and the American Medical Association held at Kansas City, Mo., May 11 to the 15th.

#### INFECTIOUS DISEASES IN LOUISIANA

Dr. J. A. O'Hara, Epidemiologist for the State of Louisiana, has furnished us with the weekly morbidity reports for the State of Louisiana, which contain the following summarized information: For the week ending April 18 there were reported 258 cases of influenza, 97 of pneumonia, 53 of malaria, 47 of whooping cough, 41 of measles, 36 of pulmonary tuberculosis and 13 each of cancer and diphtheria. There were 5 cases of epidemic cerebrospinal meningitis reported from Orleans Parish this week, 4 of which were imported. The following week, ending April 25, there was a marked decrease in the number of cases of influenza, there being only 99 listed. Other diseases of prominence include 49 of measles, 41 of pneumonia, a marked decrease, 39 of whooping cough, 34 of pulmonary tuberculosis, 24 each of malaria and syphilis and 18 of cancer. Of the unusual diseases, 1 case of dengue fever was reported from Webster Parish, one case of encephalitis from East Baton Rouge and 1 case of smallpox from Orleans. For the week ending May 2, 112 cases of syphilis led the list of reported diseases followed by 67 of whooping cough, 52 of measles, 46 of influenza, 41 of pneumonia, 30 of pulmonary tuberculosis, 22 of cancer and 13 of scarlet fever. During the week there were also reported 5 cases of cerebrospinal meningitis from Orleans Parish, 4 of which were imported. Two cases of tularemia were reported from West Carroll Parish. For the week ending May 9 there was a surprising increase in the cases of influenza and pneumonia, there being 310 of the former and 96 of the latter. These diseases were followed numerically by 78 of whooping cough, 63 of measles, 39 of cancer, 34 of pulmonary tuberculosis, 33 of malaria, 25 of syphilis and 11 of diphtheria. A case of smallpox was reported from Madison Parish, 1 of tularemia from Bienville and 2 of cerebrospinal meningitis; 1 from Orleans

and 1 from Lafayette. An explanation of the large number of cases of influenza reported the 19th week of the year and the 20th week, ending May 16, when 508 cases were listed, was due to the fact that many were delayed reports for March and April, according to a footnote. In the report for the 30th week of the year, there was still a goodly number of cases of pneumonia reported, 68 appearing on the list, followed by 43 of whooping cough, 37 of malaria, 27 each of pulmonary tuberculosis and measles, 17 of cancer, 12 of diphtheria and 11 of chickenpox. Of the 3 cases of cerebrospinal meningitis reported from Orleans Parish, 1 was imported. Another occurred in Concordia Parish, while in Calcasieu Parish a case of undulant fever was listed.

#### HEALTH OF NEW ORLEANS

The Department of Commerce, Bureau of Census reports that for the week ending April 18 there were 183 deaths in the city, distributed 110 white and 73 colored. The death rate for the group as a whole was 19.9; for the white race 16.8 and for the negro 27.4. The infant mortality rate this week was 139, distributed about equally between the two races. For the following week, which came to an end April 25, there was a slight reduction in the number of deaths, there being 171 citizens in the city who passed away during that week, making a death rate of 18.6. Of these 107 were white individuals with a rate of 16.4 and 64 colored whose rate in turn was 24. The infant mortality rate this week was 110 with the negro rate about double that of the white. The number of deaths in the city jumped up the next week which closed May 2. There were 192 deaths divided 119 white and 73 colored, with the rate for the three groups being 20.9, 18.2 and 27.4, respectively. The infant mortality rate was 99. Health conditions in the city were evidently improved for the week which ceased May 9. There were 171 deaths giving a rate of 18.6 of whom 108 were white, the rate being 16.5 and 63 negroes whose rate was 23.6. The infant mortality rate this week was 105.

#### MEDICAL LIBRARY ASSOCIATION

The Thirty-eighth Annual Meeting of the Medical Library Association will be held in St. Paul, Minnesota, June 22 and 23, 1936, and in Rochester, Minnesota, June 24. Sessions will be held at the Ramsey County Medical Society, New Lowry Medical Arts Building, St. Paul, and at the Mayo Clinic, Rochester.

The program will include addresses, discussions, and demonstrations on library procedure, medical history and literature.

This Association consists of about 175 of the medical libraries of this country and Canada, together with their librarians and a group of sup-

porting members who are physicians interested in the advancement of medical libraries.

The officers of the Association are as follows:

President, Dr. W. W. Francis, Montreal.

Vice-President, Dr. A. H. Sanford, Rochester, Miss.

Secretary, Miss Janet Doe, New York.

Treasurer, Miss Mary Louise Marshall, New Orleans.

Chairman of Executive Committee, Miss Marjorie J. Darrach, Detroit.

All interested in the development of medical libraries and a wider knowledge of medical literature are invited to attend.

#### SPECIAL NOTICE

Special attention is directed to physicians leaving the city to the fact that appropriate announcement in the professional cards can be arranged for \$2.00 per insertion. Communicate with our office in regard to details.

#### WOMAN'S AUXILIARY

##### Louisiana State Medical Society Convention News

The Woman's Auxiliary to the Louisiana State Medical Society met in Lake Charles April 28 and 29 with a total registration of 114. Headquarters for this meeting were in the Majestic Hotel where the pre-convention Executive Board meeting was held at 9:00 a. m. April 28, Mrs. Hermann B. Gessner, presiding. Following this meeting there was a luncheon in the hotel when the speakers of the occasion were Doctors C. P. Gray, H. W. Kostmayer and Walter Moss. Later in the afternoon all roads led to the very beautiful home of Mrs. Mathilda Gray where the guests were entertained at a perfectly lovely tea, the charm and hospitality of which was truly Southern and will be long remembered as a most delightful afternoon, not only by the ladies who attended, but by the many doctor-husbands who also ventured forth to enjoy the social hour so well planned.

It was quite gratifying at the President's Reception that same night, to know that everyone (that is, almost) attended the dance—they came early and stayed late—and perhaps the secret of the success of the reception was the very splendid band that furnished the rhythmic music for dancing feet.

The general meeting of the auxiliary was held at 9:00 a. m. Wednesday, April 29 in the hotel with Mrs. Gessner, President, again presiding. At this meeting the usual reports were read, accepted and filed. A very beautiful motion was introduced by Mrs. Jamieson and carried that "the auxiliary have a committee on memorials and that fitting tribute be paid deceased members at the general meeting."

The new officers for 1936-37 were then elected as follows:

President-Elect, Mrs. George D. Feldner, New Orleans.

First Vice-President, Mrs. F. G. Ellis, Shreveport.

Second Vice-President, Mrs. T. H. Watkins, Lake Charles.

Third Vice-President, Mrs. E. B. Middleton, Homer.

Fourth Vice-President, Mrs. R. R. Arceneaux, Welsh.

Recording Secretary, Mrs. C. G. Cole, New Orleans.

Treasurer, Mrs. C. P. Gray, Monroe.

Parliamentarian, Mrs. R. T. Lucas, Shreveport.

Mrs. James Byron Vaughn, the new President, then took the chair with Mrs. Gessner introducing her in her usual charming and gracious manner. This meeting was followed by a "Bowery luncheon" in the hotel with all the atmosphere of a bowery restaurant; checkered tablecloths on the table and oil-lamps all around, with Mrs. Walter Moss acting again as toastmistress in her own delightful way.

There is much reminiscing among those who went to Lake Charles, and echoes are still being heard of the delightful cocktail party in the garden of their home at which Dr. and Mrs. T. H. Watkins entertained.

A perfect ending to a perfect meeting was the barbecue picnic at the Country Club from 5 to 7 with dancing from 7 to 9 where one met all one's friends, for nobody missed any of the well-planned, wholeheartedly enjoyed parties into which so much thought and friendliness was put. The kindness, charm and hospitality and the efforts of the hostesses to make everyone feel perfectly at home will long be talked about by those fortunate enough to have gone to Lake Charles and those who could not go will regret that so much spirit of cordial welcome and friendliness was missed by them.

To Mrs. Hermann B. Gessner, the retiring President of our Auxiliary go our very kindest wishes and sincerest thanks for her untiring efforts and many hours of efficient labor she has devoted

to us, and we trust that her term of office has been enjoyed as much by her as we have enjoyed her advice and guidance.

To Mrs. Vaughn, our new President, we extend greetings and good wishes for a successful term and a sincere promise of co-operation and unity.

Mrs. George D. Feldner, Chairman,  
Press and Publicity.

#### ORLEANS PARISH

The last meeting of the 1935-36 season of the Woman's Auxiliary to the Orleans Parish Medical Society was held Wednesday, May 13. At this meeting, the annual reports were read, and the President's report which is always the most enjoyed, and yet the saddest, was very enthusiastically received. Mrs. W. Rogers Brewster, the retiring President, has been a most diligent officer and has devoted ceaseless and untiring efforts toward the welfare of our organization. Our thanks and good wishes to Mrs. Brewster for a successful year just completed.

The officers for 1936-37 were elected at this meeting with Mrs. W. P. Gardiner as President, and President-Elect, Mrs. Jules Myron Davidson. First Vice-President, Mrs. Alton Ochsner. Second Vice-President, Mrs. D. N. Silverman. Third Vice-President, Mrs. George D. Feldner. Fourth Vice-President, Mrs. Clyde Brooks. Recording Secretary, Mrs. H. Vernon Sims. Corresponding Secretary, Mrs. John S. Dunn. Treasurer, Mrs. Aynaud F. Hebert. Parliamentarian, Mrs. Frank C. Hava. Historian, Mrs. A. Mogabgab. Publicity Chairman, Mrs. Edgar Burns.

The new President and officers were welcomed by the assembly.

In conjunction with the local chapter of the Red Cross, First-Aid classes will be given during the summer months, and a large number of ladies have already enrolled for these courses.

A garden-tea followed the meeting with exchanges of "adios" and "good-byes" until the Fall and the beginning of auxiliary activities begin again.

Mrs. Edgar Burns, Publicity, Chairman.

## BOOK REVIEWS

*Law and Contemporary Problems: Expert Testimony.* Durham, N. C. Duke University School of Law, 1935. pp. 128. Price 60c.

This published quarterly comes from the School of Law, Duke University—Vol. 2, No. 4. As the title discloses, the contents deal with the following:

Development of the use of expert testimony;

Alternative to the battle of experts;

Hospital examination of criminal defendants before trial;

History and operation of the Briggs Law of Massachusetts;

Psychiatric testimony in probate proceedings;

The qualification of psychiatrists as experts in legal proceedings;

Medical testimony in personal injury cases;

Expert medical testimony in compensation proceedings;



Reasons and reasoning in expert testimony;

The admissibility of scientific evidence in criminal cases;

The expert witness in criminal cases in France, Germany and Italy; and

The compensation of expert witnesses.

The volume is replete with bibliography referable to the contents under each heading, displaying an inexhaustible research in collateral data pertaining to the subjects referred to.

The question of expert testimony is a vital one inasmuch as the expert should be properly qualified and intelligently trained. This situation is given some comment throughout the volume in the fields where expert testimony is necessary to evaluate the results of the case. Great stress is laid upon the admitting to such a procedure those properly qualified as neuropsychiatrists wherein an investigation is done previous to their being appointed to examine and present their findings of cases referred to them. This in a measure is true in some parts of the United States. However, in other parts those who are untrained and not fully qualified or fitted are permitted to give evidence as pseudo-alienists or experts, thereby causing undue criticism and at times ridicule to fall upon the field of medicine as a whole and neuropsychiatry in particular. The question of the Briggs Law of Massachusetts is covered rather fully and completely.

Still more radical innovations are necessary, in the reviewer's opinion, properly to place the status of the expert, whether he be the head of an institution caring for mental or nervous disorders who is called upon to testify, or whether he is a practitioner extra-mural, inasmuch as throughout the United States there are a number of institutions whose superintendents are not qualified professionally nor are they members of the standard organizations dealing with mental and nervous diseases, neither have their qualification or status been determined by the recently formed American Board of Psychiatry and Neurology.

The articles are well written, not tiring to read—in fact, are interesting and retain the attention. Much credit is due the editor and contributors.

WALTER J. OTTS, M. D.

*Abortion—Spontaneous and Induced:* By Frederick J. Taussig, M. D., St. Louis, C. V. Mosby Company, 1936, pp. 536.

An excellent and much needed volume dealing with every phase of abortion, including a chapter on "Abortion in Animals" written by Walter Long Williams. Every topic, from the anatomy and physiology of early pregnancy to the treatment of abortion and the complications that may arise, are dealt with in an exhaustive and authoritative manner. Statistics relative to every aspect of abortion are presented and properly

evaluated. A review of legalized abortion in the Soviet Union is included as well as a chapter dealing with legal views as regards detachment of the expulsion of the previable ovum. In the last chapter proposed methods for the control of abortion are discussed.

A more complete or valuable volume on this subject cannot be found, for not only does it include the medical side of the question but a discussion from the social, eugenic, and legal points of view as well. This volume is recommended to the medical man irrespective of his speciality and also to the social worker, the eugenicist, lawmaker, and clergy.

CONRAD G. COLLINS, M. D.

*Medical Mycology:* Fungous Diseases of Men and other Mammals: By Clarence Williams Dodge, St. Louis, C. V. Mosby Co., 1935, pp. 900, with 142 illus. Price \$8.00

This outstanding book presents the first really comprehensive and authoritative compilation of mycologic data on pathogenic fungi that has been published in America. Short chapters on general morphology, physiology, cultivation, isolation, microscopy and nomenclature of the fungi serve as an introduction to an enormous text describing in orderly detail a very large number of pathogens. The actinomycetes are included. A serious attempt is made correctly to classify the fungi, to give due credit for priority of description, and, to present a complete bibliography.

The descriptions of the families, genera and species are quite complete. For each species the synonyms, place of isolation, pathogenicity for laboratory animals, morphology and cultural characteristics are given.

From a medical viewpoint this book is of great value as a comprehensive reference for the laboratory worker. The only criticism that may be offered is the meagerness of descriptions of fungal forms as found in lesions where identification and proof of pathogenicity must first be established.

FOSTER M. JOHNS, M. D.

*Free Medical Care: Socialized Medicine:* By E. C. Buehler. New York City, Noble & Noble, 1935, pp. 360. Price \$2.00.

Economic problems in which one is very directly interested are especially difficult to evaluate impartially. The author of this volume has helped me and, I believe, will help others discuss this subject more intelligently. "Free Medical Care" consists of about twenty-five chapters, interestingly written by leading authorities for and against socialized medicine, and is intended primarily for the layman.

The arguments for and against free medical care are presented in a condensed form especially adapted for debate on the subject. The following

interesting statements are selected at random:

Approximately one million persons are engaged in medical care of different sorts, from which their livelihood is derived. About three and one half billion dollars is spent annually in this country for medical care of different sorts. Only 3 per cent of the seven hundred fifty thousand persons known to have syphilis in this country receive treatment during the primary stage.

A series of questions and answers is presented and there is a complete bibliography of about forty pages. The interesting articles for and against socialized medicine written by well-known writers such as Fishbein, Duffus, et al, are followed by the majority and minority reports of the Committee on the Cost of Medical Care, which aroused no small amount of discussion several years ago. The majority report recommended further organization of all medical personnel, preferably around hospitals, extension of the Public Health service; a group payment plan; co-ordination of state, local, and community agencies; and numerous suggestions on medical education. The minority report recommended that government competition in medical practice be discontinued; that the government relieve the medical profession of the burden of caring for the indigent; that local communities work out their own health problems; that the general practitioner be restored to a more prominent place in medical practice; that corporate practice, especially when financed through intermediary agencies, be persistently opposed; that radically new methods of rendering medical care be not rashly attempted; and that each county medical society work out the health problems of its community.

Completely socialized medicine appears to me so far in the future that none need fear its effect on his livelihood. There will always be a demand for all three types of medical service—free, inexpensive and expensive—and there will always be those who will meet these demands.

The principal criticism of the medical profession seems to be that we have not wisely invested the patient's dollar in the purchase of better health. How true this is, and what, if anything should be done about it, are problems which should be given unprejudiced thought.

I will appreciate any comment on this book by those who may read it, in order to get a cross section of medical opinion on this problem, which is attracting unceasing attention in the profession and outside of it.

CHAS. A. BARN, M. D.

*Prescription Writing and Formulary: The Art of Prescribing:* By Charles Solomon, M. D. Philadelphia. J. B. Lippincott Company, 1935. pp. 351. Price \$4.00.

So little attention is given to the subject of prescription writing in medical literature and un-

fortunately even in college teaching, that it is a real privilege to review a worthwhile contribution to this subject.

The volume contains much new subject matter and a large portion of this text is presented in an entirely original way, and one which is quite attractive. In fact, the whole subject is approached in a manner different from anything that has yet come under my observation. There is considerable material which is not even included in any other work available.

The history of prescription writing, while brief, is interesting. This is followed by a discussion of general considerations such as ethics and legal restrictions. The section on the Latin of prescription writing is condensed and an effort has been made to give only that part which is of practical value. As to the formulary, the criticism might be offered that the prescriptions are written out in full, that is, with the full Latin terminations, while in practical work these are probably best abbreviated. Those of us who have only a meager knowledge of Latin at least avoid in this way the possibility of using incorrect terminations.

A new Pharmacopoeia has recently appeared and we look forward to a revised edition of Dr. Solomon's text which will include not only the items but the nomenclature of U. S. P. XI.

The index is extensive and shows effort and judgment. As a whole this volume may be recommended to anyone interested in the art and science of writing prescriptions.

O. W. BETHEA, M. D.

*International Clinics, v. 1, 46th Series* (March, 1935. Philadelphia, J. B. Lippincott Co., 1935. pp. 314. Price \$2.50.

As usual in this volume will be found essays that are of great importance to the modern physician. Such diverse subjects as phosphatase activity, basal tuberculosis and advances in surgery for 1935 are but a few of the several comprehensive contributions to contemporary medicine. This current addition to the International Clinics series compels the critic to concede the claims of its editors that they have again contributed a superior collection of theses to our better and worthwhile literature.

I. L. ROBBINS, M. D.

*Psychology and Health:* By H. Banister, M. S., Ph. D., New York. The MacMillan Company, 1935. pp. 256. Price \$2.50.

This is a book well worth anybody's reading. In his preface the author makes a statement that every physician should know something about the psychological processes which influence the course of every life, and that his book is primarily intended for the use of general practitioners and medical students. He then proceeds to present the subject in an orderly and systematic manner, first

giving a sufficient explanation of the terminology, symptomatology and other details for anyone to follow his main discussion of conditions and reactions with intelligence and understanding, especially as this discussion is shorn of highly technical language and is concise and to the point.

In dealing with psychiatric problems, he approaches them with common sense, and carefully avoids any of the extravagant claims of one group or the other, explaining clearly, concisely and in a way which would be of benefit to any intelligent person.

In short, the book is one which may be read with profit by any physician, even a psychiatrist, or by any lay person who has to deal with the complicated problems of life.

EDMUND CONNELLY, M. D.

*Commoner Diseases of the Skin:* By S. William Becker, M. D., M. S. New York, National Medical Book Co., Inc., 1935. pp. 283. Price \$3.00

*Commoner Diseases of the Skin* by S. William Becker, M. D., is an original presentation of some of the groups of cutaneous diseases which the general practitioner frequently encounters. It is not elementary enough for the undergraduate student as it does not present the facts in an outlined manner, which seems to be more adaptable to the beginner. I consider the book an excellent supplement to either a compend or text-book of dermatology. A good part of the book is concerned with toxic dermatoses of both dermal and epidermal origin. More attention is paid to the neurodermatoses than one would expect in such a short manuscript. The diagrammatic representation of neurocirculatory instability is very concise and original.

A rather short chapter is presented of the ever increasing dermatomycoses, in fact, for such a rapidly growing field of dermatology more importance could well be stressed.

While I consider the work a very good supplementary reading for the general practitioner and one containing many original and well chosen points, I hesitate to recommend it for class room study for the beginner, as the classifications are a bit unusual, viz: The papulo-squamous eruptions may well be toxic eruptions as well, and then too many of the dermatoses of uncertain etiology are classified in the same groups as those whose origin are well established.

The formulary is good and while not voluminous contains the essential medicaments for the average dermatological case.

I think Dr. Becker should feel highly pleased

with his book and I recommend it to the general practitioner as an addition for his reference shelf.

J. K. HOWLES, M. D.

#### PUBLICATIONS RECEIVED

Dr. Duran Arrom: *Enfermedades De Las Coronarias. Angina De Pecho-Infarto E Insuficiencia Cardiaca.* Instituto De Medicina Practica. Asturias, 89.—Barcelona. 1936.

Hale, Cushman & Flint, Boston: *Bewildered Patient* by Marian Staats Newcomer, M. D.

The MacMillan Company, New York: *The Normal Diet and Healthful Living* by W. D. Sansum, M. D., R. A. Hare, M. D. and Ruth Bowden, B. S.

The C. V. Mosby Company, St. Louis: *Allergy of the Nose and Para-nasal Sinuses* by French K. Hansel, M. D., M. S.

W. B. Saunders Company, Philadelphia: *Clinical Heart Disease*, by Samuel A. Levine, M. D., F. A. C. P. *The Surgical Clinics of North America.* February, 1936. Vol. 16—No. 1. Chicago Number.

Richard R. Smith, New York: *New Faces—New Futures. Rebuilding Character with Plastic Surgery* by Maxwell Maltz, M. D.

Charles C. Thomas, Springfield: *Parenteral Therapy* by Walton Forest Dutton, M. D. and George Burt Lake, M. D. *A Textbook of Surgery*, by John Homans, M. D. *Mechanics of Normal and Pathological Locomotion in Man* by Arthur Stindler, M. D., F. A. C. S.

William Wood and Company, Baltimore: *A Synopsis of Physiology* by A. Rendle Short, B. Sc., M. D., F. R. C. S. and C. I. Ham, M. B., B. Ch. F. R. C. S. (Ed.) *Second Edition* edited by C. L. G. Pratt, M. Sc., M. D.

The Williams & Wilkins Company, Baltimore: *The Harvey Lectures* by Dr. Wm. Bosworth Castle, Dr. William Cumming Rose, Dr. Wilbur A. Sawyer, Dr. Alfred N. Richards, Dr. E. C. Dodds, Dr. G. V. Anrep, Dr. Francis G. Blake, Dr. John H. Northrop. Series XXX. *Medical Papers Dedicated to Henry Asbury Christian.* Edited by Robert T. Monroe.

℞Blakiston's Son & Co., Inc., Philadelphia: *The Diabetic Life; Its Control by Diet and Insulin* by R. D. Lawrence, M.A., M.D., F.R.C.P. (London), J. B. Lippincott Company, Philadelphia: *Passive Vascular Exercises and The Conservative Management of Obliterative Arterial Diseases* by Louis G. Herrmann, A.B., M.D.

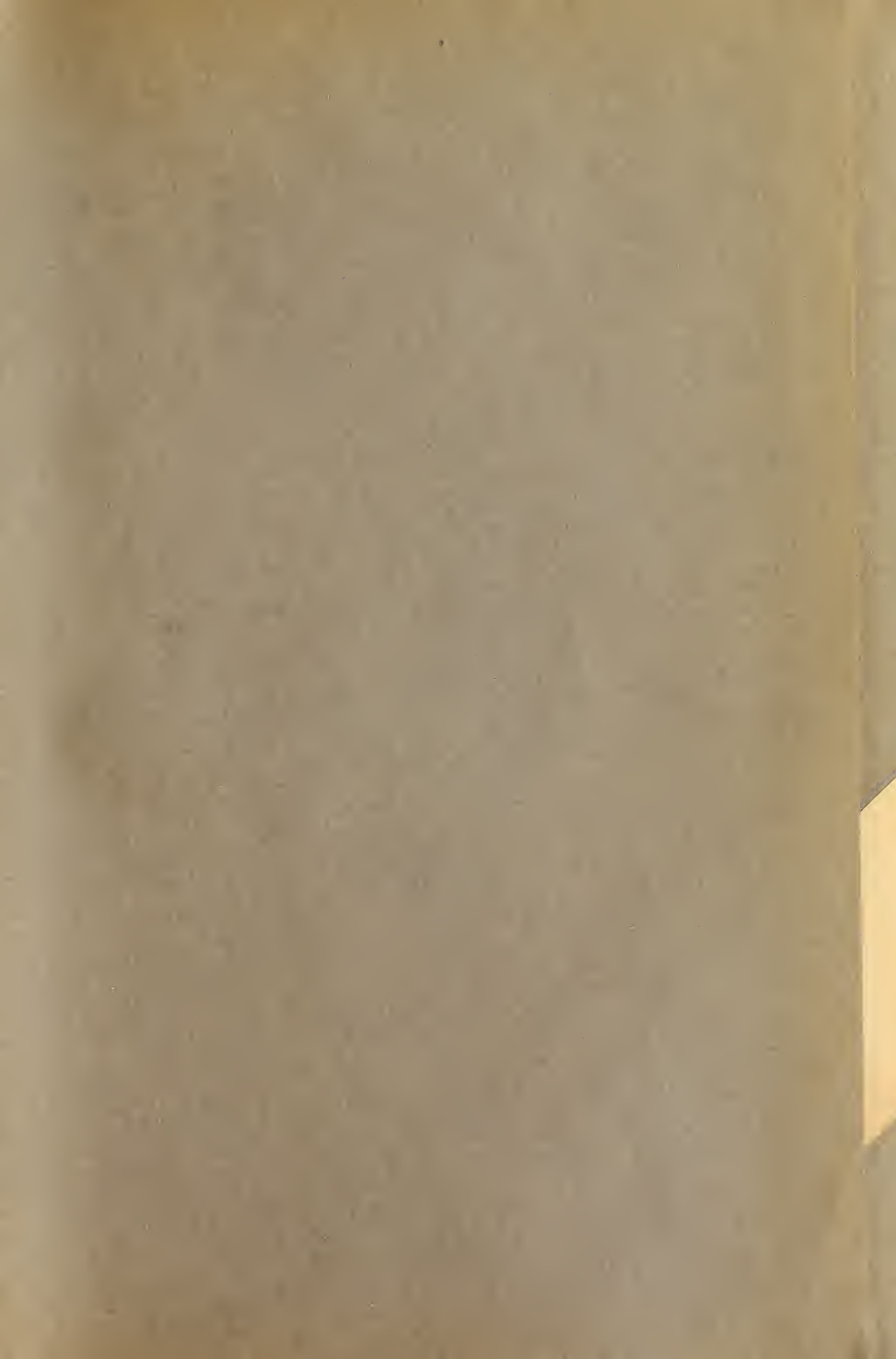
W. B. Saunders, Philadelphia: *Diseases of the Respiratory Tract by Contributors from The New York Academy of Medicine.*

Charles C. Thomas, Springfield: *Collected Writings Vol. I and Vol. II* by Alfred F. Hess.











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STAMPED BELOW

Books not returned on time are subject to a fine of 50c  
per volume after the third day overdue, increasing to  
\$1.00 per volume after the sixth day. Books not in de-  
mand may be renewed if application is made before expi-  
ration of loan period.

SEP 2 1936	7 DAY
JUN 1 1937	JUL 31 1978
FEB 3 1937	RETURNED
MAR 11 1937	JUL 24 1978
APR 21 1937	
MAY 2 1938	
MAR 23 1938	
MAY 22 1938	
SEP 17 1938	
APR 11 1939	
OCT 13 1940	
APR 18 1941	
INTER-LIBRARY LOAN	
7 DAYS AFTER RECEIPT	
SACRAMENTO SOLID	

2m-4,'36



